

My - [unclear] - Jim Cult
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DWPK



EAST ALTON, ILLINOIS 62024

April 9, 1984

Div file
Copy 4/13/84
#11902002
MADISON
EAST ALTON/OLIN CORP

CERTIFIED MAIL

Director
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

EPA Region 5 Records Ctr.



382830

Dear Sir:

In compliance with Title 35, Subtitle G, Chapter 1, Part 725.156(j), the following summarizes an incident which occurred involving an interim status hazardous waste facility:

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name, Address, and Telephone
Number of Owner | Olin Corporation
Shamrock Street
East Alton, IL 62024
(618) 258-2000 |
| 2. Name, Address, and Telephone
Number of Facility | Olin Corporation
Main Plant Facility
U.S. I.D.# ILD006271696

Remaining information same as above. |
| 3. Date, Time and Type of Incident | Discharge of a RCRA hazardous waste from a treatment facility's wastewater lifting station that overflowed due to a clogged sewer discharge line.

Spill began at approximately 8:00 a.m. on 4/3/84 and lasted about 2 hours. |
| 4. Name and Quantity of Material
Involved | Approximately 300 gallons of untreated wastewater (K044). |
| 5. Extent of Injuries | None. |
| 6. Assessment of Actual or Potential
Hazards to Human Health or the
Environment. | Impact on human health and the environment estimated to be negligible. |

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O L I N C O R P O R A T I O N

7. **Estimated Quantity and Disposition
of Recovered Material that Resulted
from the Incident.**

Approximately 300 gallons of free standing untreated wastewater was vacuumed up from the area of spillage and pumped back into a separate process sewer line.

Approximately 7 cubic yards of contaminated soil was excavated and disposed of at a hazardous waste landfill.

To comply with Part 725.156(j), a copy of this and other reports associated with this incident will be attached to the operating record for this hazardous waste facility.

Should you have any questions regarding this report, please do not hesitate to contact this office.

Very truly yours,



L.W. Maxson, Director
Energy & Environmental Services

Attachment
WJG/tec

cc: Regional Administrator
Region V
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, IL 60604

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EAST ALTON, ILLINOIS 62024

*Madison Co. 11902002 file
E. Alton/Olin Corp Main Pl.*

*Added to Reg - RA
not maps*

May 22, 1984

CERTIFIED MAIL

Illinois Environmental Protection Agency, Region V
Division of Land Pollution Control
Permit Section
2200 Churchill Road
Springfield, Illinois 62706

Dear Sirs:

Included herein is a revised confidential Part A Application for operation during interim status of a hazardous waste storage and treatment facility for the Olin Corporation, Main Plant Facility, East Alton, Illinois. Olin is claiming a portion of this application as a trade secret, specifically six maps identified as RCRA Part B Map ID No's: 19-3, 19-4, 19-6, 19-7, 19-8 and 19-9. Olin requests the Agency to protect this application from public disclosure. The maps which are claimed as Trade Secret are clearly marked as such. A copy of a statement of justification for Olin's claim of Trade Secret is attached. The original justification was sent to Mr. L.W. Eastep on April 2, 1984 along with Olin's Part B Application.

A copy of this revised Part A Application has also been submitted to the U.S. EPA.

This revision is identified herein as Revision F.

Very truly yours,

L.W. Maxson

L.W. Maxson, Director
Energy & Environmental Services

Attachment

WJG/tec

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CLAIM OF TRADE SECRET

STATEMENT OF JUSTIFICATION

Re: RCRA Part B Permit Application
Olin Corporation, East Alton, IL

In compliance with the state of Illinois Rules and Regulations, Title 35, Subtitle A, Chapter I, Part 120, Olin Corporation, Winchester Group, hereby submits a Statement of Justification for those portions of Olin Corporation's RCRA Part B Application (the "Application") for which a claim of Trade Secret has been made.

The Application should be safeguarded and withheld from persons other than those selected by Olin Corporation to have access thereto for limited purposes by 1) limiting the number of available copies and 2) reviewing requests for the information. Presently, three (3) copies of the Application are maintained by Olin. The following is list of those retaining the copies:

Winchester Environmental Coordinator
Director of Energy and Environmental Services
Brass Group Legal Department

There are no plans for printing additional copies of the Application. If, however, a request is received for a copy of or information contained within the Application, the request will be reviewed by the Olin department with whom the request was made. In order to determine that the information contained within the Application was accurate, a review of the the information was made. The information was disclosed to the following people:

Winchester Environmental Coordinator

Director of Energy & Environmental Services
and selected staff members

Brass and Winchester Legal Counsels

Manager of Winchester Facilities Engineering

It is hereby certified that Olin Corporation has no knowledge that the Application or any portion thereof has ever been published, disseminated or otherwise become a matter of general public knowledge.

The following is an explanation of the competitive value of those portions of the Application for which a claim of Trade Secret has been made.

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RCRA Map Nos. 10-2 and 19-10

These maps reveal the location of major Winchester manufacturing areas in Zone 1. From these maps Winchester's competitors could determine building size and location, estimate fixed costs (e.g. utilities) and, in conjunction with other information which they may already have, determine production capacities.

RCRA Map Nos. 19-3 and 19-4

These maps are aerial photographs of Zone 1 which include both Winchester and Brass operations. Information concerning building location, estimated size and fixed costs can be obtained.

RCRA Map Nos. 10-3, 19-6, 19-7, 19-8, 19-9

These maps are topographic drawings of Zone 4. They reveal the location of the major manufacturing areas in the zone. From these maps Winchester's competitors could determine building size and location, estimate fixed costs and relate this information to production capacity.

RCRA Map No. 19-11

This map is a sewer drawing of Zone 4. Major Winchester manufacturing areas are located on this drawing. Information concerning building size and location, fixed costs and production capacity can be obtained from this drawing.

Olin Dwg. No. 316A-01-03-02

This drawing reveals the primer mix kill operation in Bldg. 316A. The drawing reveals the flow of material and tank sizes. By making an assumption of the volume of waste in the tanks Winchester's competitors could estimate primer production and, with additional information, the volume of ammunition produced.

Olin Dwg. 209-01-04-04, 209-01-08-01, 209-01-06-01

The major concern with these drawings is they reveal the process used to reclaim scrap, primed rimfire shellcases.

Olin Dwg. 242-4-1-004

This drawing is of Winchester's high explosives operation. It reveals the number of rooms used in the manufacturing of high explosives therefore, allowing the competitors to determine the production capacity.

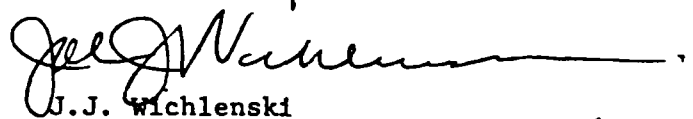
In addition to the aforementioned maps and drawings, a claim of Trade Secret has been made on all of the SOP's (Standard Operating Procedures) contained within the Application and Appendix III. The SOP's reveal Winchester's "KILL" procedures for explosives waste and operation of the ultrasonic cleaning system. These procedures could be unique to the ammunition industry and therefore offer important information to

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Winchester's competitors. Appendix III reveals information concerning the rotary destruct furnace at the Material Reclaim Facility (MRF). This unit is used to thermally destruct residual priming mix on scrap primers. Considerable work was involved in developing this treatment process and should information concerning it be revealed to Winchester's competitors, they could save a great deal of time and money in developing one of their own.


J.J. Wichlenski
Director Ammunition Operations *SL*

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OLIN MAIN PLANT FACILITY
U.S. EPA ID# ILD006271696
HAZARDOUS WASTE PART "A" PERMIT APPLICATION
REVISION F 4/25/84

The following items describe the changes made within this facility that constitutes this revision to the original Part "A" application submitted to the U.S. EPA on November 14, 1980.

1. Elimination of Site 1-2
Waste previously stored at this site is now stored at Site 1-9.
2. Elimination of Site 1-13
Waste previously stored at this site is now stored at Site 1-12.
3. Addition of Process Code S04, Line Number 7, Page 1 of 5, RCRA Form 3.

This listing was included with Olin's original Part "A" application (11/14/80). It was then removed with Olin's first revision to the Part "A" (11/17/81) due to the expectation of the U.S. EPA "delisting" the waste sometimes stored in the surface impoundment. As of this date, Olin has not been granted the "delisting", therefore, Olin is replacing the S04 listing as part of its Part "A" application for interim status.

4. Addition of Process Code S04, Line Number 19, Page 3c of 5, RCRA Form 3.

Same reason as in #3 above.

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5. The Master Drawing of the Main Plant Facility and the fourteen drawings that show the location of Olin's treatment/storage sites (Pages 5a thru 5o of 5), RCRA Form 3 have been consolidated onto the following drawings:

<u>Olin RCRA Part B</u> <u>Map I.D. No.</u>	<u>Site Numbers</u>
19-2	Master Drawing (all sites)
19-3	1-1,1-5,1-6,1-8,1-9
19-4	1-3,1-4,1-7,1-12,1-17,1-18
19-5	1-11 (includes S04 surface impoundment)
19-6	4-8,4-9
19-7	4-1,4-5
19-8	4-2a,4-2b,4-2c,4-2d,4-2e,4-3
19-9	4-4
10-5	3-1

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HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permit Program

(This information is required under Section 3005 of RCRA)

ILD0006271696

RCHA

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)

COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☒ 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)☐ 2. NEW FACILITY (Complete item below.)

FOR NEW FACILITIES PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

B. REVISED APPLICATION (place an "X" below and complete item I above)

☒ 1. FACILITY HAS INTERIM STATUS☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	501	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	502	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	503	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR
SURFACE IMPOUNDMENT	504	GALLONS OR LITERS			GALLONS PER HOUR OR LITERS PER HOUR
Disposal:					
INJECTION WELL	D79	GALLONS OR LITERS			
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER	OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY
LAND APPLICATION	D81	ACRES OR HECTARES			
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS			
UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	ACRE-FEET	A	
LITERS	L	TONS PER HOUR	HECTARE-METER	F	
CUBIC YARDS	Y	METRIC TONS PER HOUR	ACRES	B	
CUBIC METERS	C	GALLONS PER HOUR	HECTARES	D	
GALLONS PER DAY	U	LITERS PER HOUR			

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY	FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)			1. AMOUNT	2. UNIT OF MEASURE (enter code)
X-1	S 0 2	600	G	5	T 0 3	0.3	D
X-2	T 0 3	20	E	6	T 0 4	107062	U
1	S 0 1	21624020	G	7	S 0 4	1,000,000	G
2	S 0 2	8316	G	8			
3	S 0 3	0	Y	9			
4	T 0 1	264000	U	10			

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LINE 6 T04 THERMAL TREATMENT - ROTARY FURNACE 500 U
 PHYSICAL TREATMENT - HAMMERMILLS 2300 U
 PHYSICAL TREATMENT - VACUUM FILTER 104262 U

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS.....	P	KILOGRAMS.....	K
TONS.....	T	METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.

2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.

3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

WASTE NO. (X-1 to X-4)	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES			
				1. PROCESS CODES (enter)			
X-1	K 0 5 4	900	P	T	0	3	D 8 0
X-2	D 0 0 2	400	P	T	0	3	D 8 0
X-3	D 0 0 1	100	P	T	0	3	D 8 0
X-4	D 0 0 2						

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 included with above

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IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

EPA LINE	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEAS- URE (enter code)	D. PROCESSES							
				1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))			
1	F 0 0 1	5.6	T	S 0 1							
2	F 0 0 2	31.1	T	S 0 1							
3	F 0 0 3	14	T	S 0 1							
4	F 0 0 4	40	P	S 0 1							
5	F 0 0 5	826	P	S 0 1							
6	F 0 0 6	3070	T	T 0 1							
7	F 0 0 7										INCLUDED WITH ABOVE
8	F 0 0 8										INCLUDED WITH ABOVE
9	F 0 0 9										INCLUDED WITH ABOVE
10	F 0 0 7	55000	T	T 0 1							
11	F 0 0 8	5.4	T	S 0 1	S 0 2	T 0 1					
12	F 0 0 9	109550	T	S 0 1	T 0 1						
13	F 0 1 0	3.9	T	S 0 1							
14	F 0 1 1										INCLUDED WITH ABOVE
15	K 0 4 4	82950	T	T 0 1							
16	K 0 4 6										INCLUDED WITH ABOVE
17	P 0 1 2	40	P	S 0 1							
18	P 0 2 2	40	P	S 0 1							
19	P 0 2 9	700	P	S 0 1							
20	P 0 3 0	700	P	S 0 1							
21	P 0 3 5	40	P	S 0 1							
22	P 0 9 3	700	P	S 0 1							
23	P 1 0 0	40	P	S 0 1							
24	P 1 0 4	700	P	S 0 1							
25	P 1 0 5	40	P	S 0 1							
26	P 1 0 6	700	P	S 0 1							

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IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTENO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	1. PROCESS CODES (enter)																2. PROCESS DESCRIPTION (if a code is not entered in D(1))																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	01	02	03	04		05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1	P	1	1	9	40	P	S	0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

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W I L D 0 0 6 2 7 1 6 9 6

W DUP

2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

WASTE NO. 12	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES									
				1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))					
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	U 1 6 2	40	P	S 0 1									
2	U 1 6 5	40	P	S 0 1									
3	U 1 6 9	40	P	S 0 1									
4	U 1 8 8	40	P	S 0 1									
5	U 1 9 6	40	P	S 0 1									
6	U 2 0 1	700	P	S 0 1									
7	U 2 1 0	40	P	S 0 1									
8	U 2 1 1	40	P	S 0 1									
9	U 2 1 3	40	P	S 0 1									
10	U 2 1 9	40	P	S 0 1									
11	U 2 2 0	700	P	S 0 1									
12	U 2 2 2	40	P	S 0 1									
13	U 2 2 6	700	P	S 0 1									
14	U 2 2 8	40	P	S 0 1									
15	U 2 2 9	700	P	S 0 1									
16	U 2 3 9	40	P	S 0 1									
17	D 0 0 1	72.8	T	S 0 1									
18	D 0 0 2	730	T	S 0 1	S 0 2								
19	D 0 0 2	187666	T		T 0 4	S 0 1	S 0 4						
20	D 0 0 8												INCLUDED WITH ABOVE
21	F 0 0 6												INCLUDED WITH ABOVE
22	F 0 0 7												INCLUDED WITH ABOVE
23	F 0 0 8												INCLUDED WITH ABOVE
24	F 0 0 9												INCLUDED WITH ABOVE
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EPA I.D. NUMBER (enter from page 1)												FOR OFFICIAL USE ONLY											
W I L D D D E 2 7 1 6 9 6												W DUP											
T 1												T 2											
IV. DESCRIPTION OF HAZARDOUS WASTES (continued)																							
NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																			
				1. PROCESS CODES (enter)																			
				2. PROCESS DESCRIPTION (if a code is not entered in D(1))																			
1	K 0 4 4			INCLUDED WITH ABOVE																			
2	K 0 4 6			INCLUDED WITH ABOVE																			
3	D 0 0 3	3110	T	S 0 1	T 0 3	T 0 4																	
4	D 0 0 4	500	P	S 0 1																			
5	D 0 0 5	3000	P	S 0 1																			
6	D 0 0 6	500	P	S 0 1																			
7	D 0 0 7	500	P	S 0 1																			
8	D 0 0 8	2026.3	T	S 0 1	S 0 2	T 0 3																	
9	D 0 0 9	140.6	T	S 0 1																			
10	D 0 1 0	500	P	S 0 1																			
11	D 0 1 1	500	P	S 0 1																			
12	K 0 4 4	1549	T	T 0 1																			
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MAY 10 1984

E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED

MAY 29 1984

E.P.A. - D.L.P.C.

EPA I.D. NO. (enter from page 1)

F I L D 0 0 6 2 7 1 6 9 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

3 8 5 3 0 3 0

0 9 0 0 6 0 0 0

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

E

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

F G

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

D.W. Griffin

D.W. Griffin

5/25/84

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

D.W. Griffin

D.W. Griffin

5/25/84

V. FACILITY DRAWING (see page 4)

See Olin Drawings: -

Olin RCRA Part B
Map I.D. No.Site Numbers

19-2	Master Drawing (all sites)
19-3	1-1,1-5,1-6,1-8,1-9
19-4	1-3,1-4,1-7,1-12,1-17,1-18
19-5	1-11 (includes S04 surface impoundment)
19-6	4-8,4-9
19-7	4-1,4-5
19-8	4-2a,4-2b,4-2c,4-2d,4-2e,4-3
19-9	4-4
10-5	3-1

RECEIVED

MAY 29 1984

E.P.A. - D.L.P.C.
STATE OF ILLINOIS



217/782-2113

OPERATING PERMIT

PERMITTEE

Olin Corporation
Shamrock Street
East Alton, Illinois 62024

Attention: L. W. Maxon

Application No.: 78030001

I.D. No.: 119020AAG

Applicant's Designation: MPUTILOPOP

Date Received: November 30, 1984

Subject: Main Plant Utilities Operations

Date Issued:

Expiration Date: September 30, 1985

Location: Shamrock Street, East Alton

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of four boilers, two incinerators with waste heat boilers and two Luhr baghouses at Zone 3 and a salt bin as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. The two (2) Zone 3 ECP incinerators are allowed to burn general factory waste and purchased uncontaminated packaging materials consisting of paper, cardboard, and small amounts of wood under the following provisions:
 - a) the total waste feed rate to the incinerators shall not exceed 2160 lb/hr and
 - b) the incinerators may be operated temporarily without the baghouse until September 30, 1985, provided that Olin segregates and separates its general factory waste and purchased packaging material in accordance with the procedures contained in the permit application, and provided that none of the 20-identified materials contained in the emission guarantee of ECP are included in the waste materials; and
 - c) after September 30, 1985, the incinerators shall be run only with the Luhr baghouses or other approved filtering devices in place and operating unless Olin demonstrates by means of a stack test, that operation of this incinerator without this control equipment can meet the emission limits of Rule 203(e). Any new control equipment shall be approved by the Agency through a construction permit issued by the Division of Air Pollution Control; and



Page 2

- d) the particulate matter concentration in the exhaust gases prior to and after installation of baghouses shall not exceed 0.08 and 0.04 grains (respectively) per standard cubic foot, corrected to 12% carbon dioxide.
- 2. The two (2) Zone 3 ECP incinerators are allowed to test burn the following special wastes at the indicated maximum feed rates, with the Luhr baghouses in place and operating, for the purpose of conducting emission stack tests and establishing operating and handling procedures for these wastes:
 - a) oil contaminated wastes - 100 lb/hr
 - b) anthracite coal filter media - 50 lb/hr
 - c) cob meal - 50 lb/hr
 - d) dewatered lift station scum - 50 lb/hr
 - e) T-400 oil separator sludge - 75 lb/hr
 - f) dewatered clarifier skimmings - 50 lb/hr
 - g) paper tube wax - 10 lb/hr
 - h) smokeless powder scrap - 250 lb/hr
 - i) explosive contaminated scrap - 50 lb/hr
 - j) empty primed shot shells - 300 lb/hr

The maximum feed rate at any time to the incinerators shall not exceed 2160 lb/hr.

The approval of the test burn of two special wastes described in items (h) and (i) does not relieve the permittee of the responsibility of complying with the standards for incineration of hazardous waste (40 CFR, paragraphs 263.340 through 264.351).

- 3. At the time of the renewal of this Permit, the organic material, nitrogen oxide, particulate matter, and carbon monoxide concentrations in the effluent stream of the incinerators shall have been measured by an approved independent testing service utilizing test methods approved by the Agency, and the test results submitted with the permit renewal application.

The Agency may witness these tests. The Agency's regional office:

Illinois Environmental Protection Agency
Division of Air Pollution Control
115A W. Main Street
Collinsville, Illinois 62234

shall be notified a minimum of thirty (30) days prior to the expected date of these tests and further notified a minimum of five (5) working days prior to the test of the exact date, time and place of these test.



Page 3

4. Prior to conducting the test required in Special Condition 3 a stack test protocol shall be submitted to the Agency for approval detailing the types of wastes to be burned during the tests, the methods to be used in mixing wastes and the amount and percentages of each waste constituent, the operating temperatures, number of such tests, etc.

This protocol should be developed recognizing that the tests to be conducted must be representative of the maximum actual conditions to be utilized in practice, and if successful, will dictate the conditions under which future operating permits will be approved by the Agency. In addition to the measurement of the above specified pollutants, the test protocol shall provide for the identification and measurement of non-criteria contaminants of concern are emitted, the permittee shall also submit information addressing the potential health impacts of such emissions.

5. The Permittee shall keep records of the type and amount of each waste material burned in the Zone 3 incinerators. These records shall be maintained by the Permittee for a period of two (2) years and shall make such records available to the Agency upon request.
6. Emissions of particulate matter (TSP), sulfur dioxide (SO₂), nitrogen oxide (NO_x), organic material (OM) and carbon monoxide (CO) from (2) incinerators, (4) boilers, and (1) salt bin shall not exceed the amounts specified in the Table below.

Emission Source	Annual Emissions (Tons/Year)				
	TSP	SO ₂	NO _x	OM	CO
Incinerators (2)	9.68	21.6	25.6	25.6	91.7
Boilers (4)	2.0	0.1	24.0	0.6	3.4
Salt Bin	0.03	-		-	

These limits (applicable to each incinerator) are based on:

- a. The emission factors for NO_x, SO_x, CO and HC taken from EPA Manual AP-42, maximum operating rate of 2,160 lbs/hr and maximum hours of operation (8000 hrs/yr) indicated in the permit application.
- b. The TSP emission limit (0.04 gr/scf of effluent gases corrected to 12% CO₂), maximum flow rate (3540 scfm at 12% CO₂) and maximum hours of operation (8000 hrs/yr) as requested in the permit application.



Page 4

7. The total amount of natural gas fired in the four new boilers shall be limited to 400 MM scf/year. Olin shall maintain records of annual natural gas usage in these boilers and shall make such records available to the Agency upon request.
8. The permit includes the test burning of 2 special wastes (smokeless powder scrap and explosive contaminated scrap) previously burned in the Zone 4 incinerator, with no increase in emissions above that previously allowed as stated in Special Condition No. 6.

Prior to issuing any operating permit to allow the permanent incineration of these wastes in the Zone 3 incinerator, the Agency will require that the Permittee request Permit No. 78010039 to be revised to delete the Zone 4 incinerator.

It should be noted that this permit has been revised to include operation of the equipment described in construction permit 84110065.

Bharat Mathur, P.E.
Manager, Permit Section
Division of Air Pollution Control

BM:MJP:jd/2321D-21-25

cc: Region 3



EAST ALTON, ILLINOIS 62024

November 5, 1984

1190200002 / Madison
E. Alton / Olin - Main
Sub R

CERTIFIED MAIL

Mr. Ken Liss
Compliance Monitoring Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Re: LPC 1190200002
ILD 006271696

Dear Mr. Liss:

On October 26, 1984, Olin submitted to the Agency its first set of results of analyses for five groundwater monitoring wells that surround the Emergency Holding Lagoon located in Zone 6 of Olin's Main Plant Facility.

As you are aware, the concentrations reported for Gross Alpha seemed to be higher than one might normally expect to find in groundwater. Discussions with Mr. Ron Ferris (owner of Environmental Analysis, the laboratory Olin hired to sample the wells and perform the required analyses) have revealed that the groundwater samples taken for radioactive analyses were not filtered to remove solids. The presence of sand and clay (solids) in the groundwater samples may be the reason why the Gross Alpha concentrations were higher than expected.

Wayne Galler of Olin contacted Mr. Perry Mann of the IEPA's Collinsville Office on November 1, 1984 to discuss this subject. Mr. Mann indicated that all background groundwater samples collected for radioactive analyses should be filtered (to remove solids) before they are analyzed. Mr. Mann stated that Environmental Analysis should be instructed to filter the next three quarterly samples collected for radioactive analyses. If the Gross Alpha concentrations from the next three quarterly samples result in significantly lower values than the first quarter results, then the IEPA will probably instruct Olin to disregard the first quarter results for Gross Alpha when performing the annual statistical analyses.

NOV 09 1984

IEPA-DLPC

Please contact Olin if you do not agree with our understanding of Mr. Mann's instructions presented in this letter.

Very truly yours,



L. W. Maxson, Director
Energy & Environmental Services

WJG/jso

cc: Mr. K. G. Mensing,
Southern Regional Manager
Field Operations Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
117 W. Main Street
Collinsville, IL 62234

cc: Mr. Ron Ferris
Environmental Analysis
3278 N. Lindbergh
Florissant, MO 63033

NOV 09 1984
IEPA-DLPC



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

Sub F

DATE: November 14, 1984

TO: Division File

FROM: Perry Mann - Southern Region

SUBJECT: LPC 1190200002 - Madison County - East Alton/Olin - ILD006271696
Follow-up Subpart F Inspection dated October 31, 1984

Margo Dilday and myself conducted a follow-up inspection at the subject facility on October 31, 1984 in order to determine compliance with the Subpart F Groundwater Monitoring requirements. Mr. Wayne Galler of Olin accompanied us during the on-site inspection.

Since the last inspection (July 12, 1984), Olin has completed implementing the groundwater monitoring program, which was developed in accordance with their approved proposal and compliance schedule. The information from hydrogeologic investigation, the Groundwater Quality Assessment Program, and the Sampling/Analyses Plan were submitted on August 27, 1984.

It was determined that the facility was in compliance with Subpart F requirements on the subject inspection date. Samples were collected on September 19, 1984 from the monitoring wells for initial background analyses (1st quarter). Environmental Analyses collects the samples and does the analytic work for Olin. The sampling protocol utilized follows the general procedures outlined in the Sampling and Analyses Plan prepared by Olin dated August 1984. Mr. Galler indicated that this plan is currently undergoing revision such that it is being made more specific and comprehensive. Once completed, a copy of this document shall be submitted to this office for review.

A total of seven wells were installed adjacent to the regulated impoundment; one well OMW101 is not being monitored for water quality under the Subpart F program, although water levels are still collected for evaluation. OMW-105 and OMW-106 are designated as upgradient wells; OMW-102, 103 and 104 are down-gradient wells.

All apparent violations cited in the November 10, 1983 CIL were determined to be resolved as of this October 31, 1984 inspection date.

PCM:jlr

cc: Southern Region File
Mark Haney ✓



USE
HAC
COMPLIANCE

October 26, 1984

CERTIFIED MAIL

RCRA Activities
Part B Permit Application
U.S. EPA, Region V
P.O. Box A3587
Chicago, IL 60604-3587

Re: Olin Corporation
Main Plant Facility
ILD 006271696

bird water

Gentlemen:

In accordance with Title 40 of the Code of Federal Regulations, Part 265, Subpart F, Groundwater Monitoring, Part 265.94(a)(2)(i), herewith are submitted two copies each of the following reports concerning Olin Corporation's Main Plant Facility Zone 6 Emergency Holding Lagoon:

First quarter results of analyses for (1) parameters characterizing the suitability of groundwater as a drinking water supply, (2) parameters establishing groundwater quality, and (3) parameters used as indicators of groundwater contamination.

These analyses were conducted upon five groundwater monitoring wells that surround the Zone 6 Emergency Holding Lagoon. The five wells are identified as follows:

OMW-102	downstream
OMW-103	downstream
OMW-104	downstream
OMW-105	upstream
OMW-106	upstream

Following is a list of those parameters (from the enclosed results) whose concentrations exceed the maximum contaminant levels listed in Appendix III (U.S. EPA Interim Primary Drinking Water Standards):

NOV 07 1984
IEPA-DLPC

<u>Well Number</u>	<u>Parameter</u>	<u>Concentration</u>	<u>U.S. EPA Standard</u>
OMW-105	Lead	21 pCi/l	.05 mg/l
OMW-102	Radium	21 pCi/l	5 pCi/l
OMW-103	Radium	29 pCi/l	5 pCi/l
OMW-104	Radium	10 pCi/l	5 pCi/l
OMW-105	Radium	15 pCi/l	5 pCi/l
OMW-102	Gross Alpha	114 pCi/l	15 pCi/l
OMW-103	Gross Alpha	154 pCi/l	15 pCi/l
OMW-104	Gross Alpha	59 pCi/l	15 pCi/l
OMW-105	Gross Alpha	46 pCi/l	15 pCi/l
OMW-106	Gross Alpha	17 pCi/l	15 pCi/l
OMW-102	Coliform Bacteria	93/100 ml	1/100 ml
OMW-103	Coliform Bacteria	460/100 ml	1/100 ml
OMW-104	Coliform Bacteria	93/100 ml	1/100 ml
OMW-105	Coliform Bacteria	460/100 ml	1/100 ml
OMW-106	Coliform Bacteria	240/100 ml	1/100 ml

A certification statement, as required by 40 CFR 270.11, has been attached to this submittal.

If you have any questions regarding the enclosed reports or this letter, please contact me at your earliest convenience.

Very truly yours,

L.W. Maxson

L.W. Maxson, Director
Energy & Environmental Services

Enclosures (3)
WJG/tec

cc: Mr. Ken Liss
Compliance Monitoring Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706
(cover letter only)

cc: Mr. L. W. Eastep
Permit Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

NOV 07 1984
IEPA-DLPC

ENVIRONMENTAL ANALYSIS, INC.

ANALYTICAL CHEMISTRY - RESEARCH - FIELD STUDIES

3278 N. LINDBERGH BLVD.

FLORISSANT, MO. 63033

PHONE 1-314-921-4488



Date 10-16-84
Report No. 16005
Lab No. 514505 thru 9
P.O. No. EA-SO 6309 B

Mr. Mike Reddington
OLIN CORPORATION
Brass Division
E & E Engineering
East Alton, IL 62024

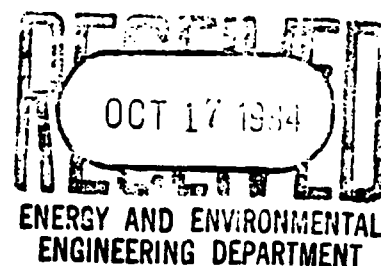
REPORT OF ANALYSIS

Subject: Analysis of Groundwater Samples in accordance with
Methods For Chemical Analysis of Water and Wastes
(EPA 600/4-79-020) and RCRA 40 CFR 265.90.

RECEIVED
NOV 07 1984
IEPA-DLPC

Sample Identification:

#1 - OMW #102, 9-19-84. ✓
#2 - OMW #103, 9-19-84. ✓
#3 - OMW #104, 9-19-84. ✓
#4 - OMW #105, 9-19-84. ✓
#5 - OMW #106, 9-19-84. ✓



Results of Analysis:

	# 1	# 2	# 3	# 4	# 5
Arsenic, mg As/l	<0.010	<0.010	<0.010	<0.010	<0.010
Barium, mg Ba/l	0.08	0.13	0.18	0.14	0.12
Cadmium, mg Cd/l	0.002	0.003	0.003	0.002	0.003
Chromium, mg Cr/l	0.005	0.008	0.004	0.005	0.006
Fluoride (elec.), mg F/l	0.15	0.13	0.17	0.10	0.09
Lead (GTF), mg Pb/l	0.013	0.040	0.002		0.004
Mercury, mg Hg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, mg Se/l	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, mg As/l	0.001	0.002	0.003	0.002	<0.001
Nitrate Nitrogen, mg N/l	3.97	4.04	2.99	1.55	0.52

ENVIRONMENTAL ANALYSIS, INC.

ANALYTICAL CHEMISTRY · RESEARCH · FIELD STUDIES

3278 N. LINDBERGH BLVD.

FLORISSANT, MO. 63033

PHONE 1-314-921-4488



Results of Analysis:

Date 10-16-84
Report No. 16005

	# 1	# 2	# 3	# 4	# 5	
	----	----	----	----	----	
Radium, pCi/l	21±2	29±2	10±1	15±1	2±1	✱
Radioactivity, Gross Alpha pCi/l	114±33	154±48	59±19	46±16	17±8	✱
Radioactivity, Gross Beta pCi/l	73±10	90±11	32±7	45±7	14±3	✱
Coliform, Total #/100 ml.	93	460	93	460	240	
Chloride, mg Cl/l	13.3	46.5	58.5	12.1	12.4	
Iron, mg Fe/l	<0.01	0.04	<0.01	0.01	4.57	
Manganese, mg Mn/l	0.107	0.041	0.043	0.720	1.42	
Phenols, mg Phenol/l	0.004	<0.001	0.014	<0.001	<0.001	
Sodium, mg Na/l	8.89	66.2	57.9	8.77	20.2	
Sulfates, mg SO4/l	80	168	192	114	142	

Respectfully submitted,

R. M. Ferris
R. M. Ferris, Director *RF*

NOV 07 1984
IEPA-DLPC

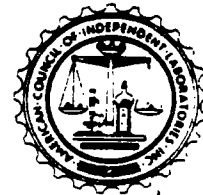
ENVIRONMENTAL ANALYSIS, INC.

ANALYTICAL CHEMISTRY - RESEARCH - FIELD STUDIES

3278 N. LINDBERGH BLVD.

FLORISSANT, MO. 63033

PHONE 1-314-921-4488



Date 10-16-84
Report No. 16006
Lab No. 514105 thru
P.O. No. EA-SO 6309 1

Mr. Mike Reddington
OLIN CORPORATION
Brass Division
E & E Engineering
East Alton, IL 62024

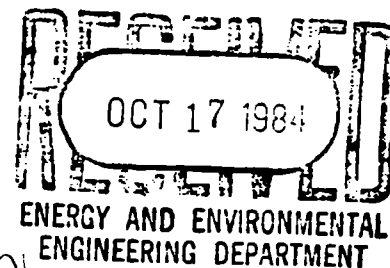
REPORT OF ANALYSIS

Subject: Analysis of Groundwater Samples in accordance with
Methods For Chemical Analysis of Water and Wastes
(EPA 600/4-79-020) and RCRA 40 CFR 265.90.

NOV 07 1984
IEPA-DLPC

Sample Identification:

#1 - OMW #102, 9-19-84.
#2 - OMW #103, 9-19-84.
#3 - OMW #104, 9-19-84.
#4 - OMW #105, 9-19-84.
#5 - OMW #106, 9-19-84.



Results of Analysis:

	# 1	# 2	# 3	# 4	# 5
pH Value, pH Units (1)	6.1	6.6	6.6	6.6	6.1
pH Value, pH Units (2)	6.1	6.5	6.5	6.6	6.1
pH Value, pH Units (3)	6.1	6.5	6.5	6.6	6.2
pH Value, pH Units (4)	6.1	6.5	6.5	6.6	6.2
Spec. Cond., umhos/cm (1)	520	860	940	540	720
Spec. Cond., umhos/cm (2)	520	840	930	540	720
Spec. Cond., umhos/cm (3)	530	850	940	535	710
Spec. Cond., umhos/cm (4)	530	850	940	525	725
Total Organic Carbon, mg/l	2.93	2.62	2.22	1.16	1.76
Total Organic Carbon, mg/l	2.35	3.16	3.13	1.32	2.31

ENVIRONMENTAL ANALYSIS, INC.

ANALYTICAL CHEMISTRY - RESEARCH - FIELD STUDIES

3278 N. LINDBERGH BLVD.

FLORISSANT, MO. 63033

PHONE 1-314-921-4488



Results of Analysis:

Date 10-16-84
Report No. 16006

	# 1	# 2	# 3	# 4	# 5
	----	----	----	----	----
Total Organic Carbon, mg/l	2.05	2.83	3.78	1.22	1.79
Total Organic Carbon, mg/l	2.70	2.79	2.87	1.19	2.08
T.O.X., mg/l	0.02	0.37	0.65	0.02	0.09
T.O.X., mg/l	0.03	0.36	0.66	<0.02	0.06
T.O.X., mg/l	0.03	0.38	0.69	0.02	0.06
T.O.X., mg/l	0.07	0.45	0.67	0.05	0.05
Sampling Chgs., Man-hrs	1	1	1	1	1
Sampling Chgs., Man-hrs	1	1	1	1	1
Sampling Chgs., Man-hrs	1	1	1	1	1
Sampling Chgs., Man-hrs	1	1	1	1	1

Respectfully submitted,

R.M. Ferris
R. M. Ferris, Director *ef*

NOV 07 1984
IEPA-DLPC

ENVIRONMENTAL ANALYSIS, INC.

ANALYTICAL CHEMISTRY - RESEARCH - FIELD STUDIES

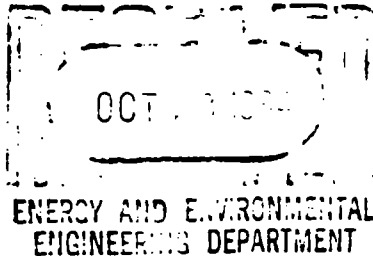
3278 N. LINDBERGH BLVD.

FLORISSANT, MO. 63033

PHONE 1-314-921-4488



Mr. Mike Redington
OLIN CORPORATION
Brass Division
E & E Engineering
East Alton, IL 62024



Date 10-19-84
Report No. 16048
Lab No. 514105 thru 9
P.O. No. EA-SO 6309 B

REPORT OF ANALYSIS

Subject: Analysis of Groundwater Samples in accordance with
Methods for Chemical Analysis of Water and Wastes
(EPA 600/4-79-020) and RCRA 40 CFR 265.90.

Sample Identification:

#1 - OMW #102, 9-19-84.
#2 - OMW #103, 9-19-84.
#3 - OMW #104, 9-19-84.
#4 - OMW #105, 9-19-84.
#5 - OMW #106, 9-19-84.

Results of Analysis:

	# 1	# 2	# 3	# 4	# 5
	----	----	----	----	----
Pesticides,	1	1	1	1	1
Endrin, mg/l	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Lindane, mg/l	<0.004	<0.004	<0.004	<0.004	<0.004
Methoxychlor, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene, mg/l	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-D, mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5-TP Silvex, mg/l	<0.01	<0.01	<0.01	<0.01	<0.01

Respectfully submitted,

R. M. Ferris, Director

RECEIVED
NOV 07 1984
IEPA-DLPC

East Alton/Olin Corporation
011902002 - Madison



EAST ALTON, ILLINOIS 62024

June 14, 1984

RECEIVED

JUN 18 1984

E.P.A. - D.E.P.C.
STATE OF ILLINOIS

Mr. Dale Helmers
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Dear Mr. Helmers:

The purpose of this letter is to submit, for Illinois EPA Approval, Olin's proposal for Hydrogeologic Investigations and Monitoring Well Installation at Olin's Zone 6 Emergency Holding Lagoon. Specifically, Olin seeks agreement from the Illinois EPA that the proposed scope of work will meet the Agency's requirements for the establishment of a groundwater monitoring system which will comply with Title 35, Illinois Administrative Code, Part 725, Subpart F, Groundwater Monitoring.

Olin's proposed scope of work is outlined in Attachment I which is a report from John Mathes and Associates titled "Study of Scope and Costs For Hydrogeologic Investigations and Monitoring Well Installation - Zone 6, Emergency Overflow Lagoon". As stated in the report, the proposed scope of work was developed in consultation with the Collinsville Regional Office of IEPA and reflects the Agency's requirements as understood by John Mathes and Associates.

Attachment II is a Project Completion Schedule for establishing a groundwater monitoring system and collecting and analyzing the first set of samples. The drilling start date is, of course, dependent on Olin's receipt of a timely response from the Illinois EPA regarding the proposed scope of work and resolution of any changes in scope which may be necessary as a result of the Agency's review.

If you have any questions regarding this submittal, please contact M.F. Redington at (618) 258-3394.

Very truly yours,

A handwritten signature in cursive script, reading "L.W. Maxson".

L.W. Maxson, Director,
Energy & Environmental Services

MFR/tec

cc: Mr. Perry Mann
IEPA - Collinsville

ATTACHMENT I

STUDY OF SCOPE AND COSTS FOR
HYDROGEOLOGIC INVESTIGATIONS AND
MONITORING WELL INSTALLATION
ZONE 6, EMERGENCY OVERFLOW LAGOON

February 28, 1984

JOHN MATHES & ASSOCIATES, INC.
123 Wedgewood Drive
P.O. Box 330
Columbia, IL 62236

RECEIVED

JUN 18 1984

EPA - OLEFOS
STATE OF ILLINOIS



STUDY OF SCOPE AND COSTS FOR
HYDROGEOLOGIC INVESTIGATIONS AND
MONITORING WELL INSTALLATION
ZONE 6, EMERGENCY OVERFLOW LAGOON

This report summarizes the results of preliminary engineering studies performed by John Mathes and Associates, Inc. to establish the scope and associated cost of services necessary to establish a groundwater monitoring system for the emergency overflow lagoon located in Zone 6 at the Olin Corporation facility in East Alton, Illinois (Plate 1).

The capability of a groundwater monitoring system is somewhat subjective in nature and depends on the degree and types of detection assurance which are desired. Because the ultimate acceptability of any such system design appears at this time to rest with the Illinois Environmental Protection Agency, the Collinsville Regional Office of IEPA was consulted for their opinions and preferences in system design. The system design presented herein represents our understanding of a system which meets the requirements of both IEPA and John Mathes and Associates, Inc., for Olin's emergency holding lagoon site.

Although current federal and state regulations make direct reference only to the monitoring well system without comment to the performance of hydrogeological studies prior to or concurrent with monitoring well installation, it is our experience that a site specific hydrogeologic investigation must



also be performed to demonstrate to the IEPA that the system is "capable" of immediately detecting a release of contamination, both now and under the reasonable range of variations in the hydrogeologic regime which may occur in the future. For this reason the scope of services presented herein includes such a study.

In order to establish scope and cost estimates for hydrogeologic studies and monitoring well installation it is also necessary to make advance assumptions concerning the subsurface conditions which must be dealt with. To the degree that such assumptions are accurate, estimates of scope and cost for services should also be. Fortunately, some previous subsurface information from the area exists in the form of borings which were made for the construction of the sewage treatment plant facilities. Boring information for the sewage plant in general and the emergency holding lagoon in particular suggest that the stratigraphic sequence of soils at the site is relatively uniform without the existence of stratified impervious layers and perched waters over the major sand aquifer. If this is true, then a simple monitoring system including relatively few monitoring wells should suffice. When these conditions were discussed with the IEPA a tentative program including five borings all converted to monitoring wells was agreed upon as an acceptable initial program of investigation and monitoring. The need for any



additional borings or monitoring wells to further define site hydrogeology would be determined on the basis of what was encountered during the initial program.

As discussed with IEPA, three of the five borings for the monitor wells should be made to a minimum of thirty feet below the invert elevation of the lagoon. The other two should be extended to approximately 5 to 7 feet below the elevation at which groundwater is first encountered. Three of the borings should be sampled on continuous intervals down to the water level and on 2-1/2 foot vertical intervals thereafter. The other two borings should be sampled for their entire depth on 2-1/2 foot vertical intervals.

Present groundwater levels and flow directions beneath the site are unknown. Water levels noted during the 1970 site investigation showed flow toward the southwest and water in the elevation range of 410 to 415 MSL. If water levels have remained unchanged then boring depths in the 30 to 40 foot range would be expected with monitoring wells being approximately this depth. Plate 2 shows potential locations for four of the five monitoring wells selected on the basis of the groundwater flow direction which existed in 1970. In practice, boring locations 3 and 4 will be selected based on water level data from well locations 1 and 2. According to the IEPA, a fifth boring and monitoring well will be required at a location upgradient and further from the



emergency holding lagoon than monitoring wells 1 through 4 to assure greater certainty of its representativeness of background conditions. Plates 3 and 4 show water levels throughout the American Bottoms Area between 1971 and 1977. As shown on the plates, groundwater levels in the general Alton-Wood River area rose in this period. However, little information about conditions beneath this site can be deduced. The regional rise in water levels is believed to have occurred primarily in response to changes in the quantity and distribution of deep well pumping south and west of the site. If similar rises have occurred at the Olin site their monitoring wells and some borings may be somewhat shallower than would be required based on 1970 water levels.

Another major question to be addressed by the hydrogeologic study is the impact of the East Fork of the Wood River on the direction of groundwater flow at the site. If the River serves as both a source of recharge to and discharge from the groundwater, then monitoring well requirements may be more extensive than those planned herein. A correlation of stage hydrograph data from the river to the response of aquifer water levels is required to answer this question with greater certainty although available hydrogeologic information shown on Plates 2 and 3 does not indicate the existence of groundwater flow toward the Wood River.



Based upon the foregoing discussions an initial program of field investigation including 5 borings sampled as discussed and converted to 2 inch diameter monitoring wells is recommended. Each of the wells should be installed through hollow stemmed augers without the use of bentonitic or organic drilling fluids. The wells should be finished using no more than 10 feet of well screen surrounded by a natural or artificial gravel pack as shown in Plate 5. The well screen should be set so as to split the existing water surface with about 1/2 above and 1/2 below the existing water level. Above the screened interval the borehole should be sealed with a minimum 2 foot layer of bentonite pellets followed by a cement-bentonite grout. Locking steel well protectors should then be concreted into place over the monitoring well riser pipe. Both the well screen and the riser should be threaded pvc of schedule 40 gauge. (See Plate 5). In addition to the soil boring and monitoring well program outlined, field work in the form of borehole permeability testing, surveying to establish borehole and well elevations, water level gauging in the Wood River at several points and well development to remove any minor traces of drill water should be performed.

A laboratory testing program including visual classification of samples according to USDA Methods and grain size analysis should be anticipated to assist in identifying site stratigraphy. No Atterberg limits tests, natural moisture



content tests or laboratory permeability tests are anticipated to be necessary based on the granular nature of site soils indicated from earlier borings.

Hydrogeologic investigations and monitoring well installation will require professional services in the following areas for the project.

1. Planning, coordination and supervision of exploration, field and laboratory testing programs outlined previously.
2. Procurement and review of recent publications regarding the hydrogeology of the Alton-Wood River area as well as stage hydrographs for Wood River.
3. Engineering and hydrogeologic evaluation of field and laboratory test data as well as relationships of site water level trends to those of the Wood River and surrounding area.
4. Review of the adequacy of the existing monitoring well network on the basis of these analyses and recommendations of additional monitoring wells or piezometers if shown to be prudent or necessary to demonstrate system capability.
5. Preparation of water level maps, soil profiles, graphical and tubular data summaries and a final report which summarizes the work performed, data



generated and hydrogeological evaluations. The report will also include rationales which support the choice and capabilities of the existing monitoring well system.

6. Post-report meeting with Olin to discuss report findings and conclusions.

We estimate the cost of the services described to be as follows:

1. Monitoring Well Installation -----

Includes soil boring, sampling and monitoring well installation including labor, equipment and materials for 5 monitoring wells finished as shown in Plate 5.

2. Field Services -----

Includes surveying, well development, stream gauging, field permeability testing, well protector placement, transducer-recorder equipment charges, pump and generator rental charges.

3. Laboratory Testing Services -----

Includes laboratory testing and preparation of finished boring logs.

4. Professional Services -----

Includes engineering, hydrogeologic, clerical and drafting services.

Grand Total----

Based upon discussions with the IEPA under the currently proposed program, either four or five of the monitoring wells will have to be sampled for groundwater



chemistry depending on the results of hydrogeologic studies conducted. If the groundwater flow shows the potential for changing toward and then away from the Wood River during its history, then all five monitoring wells will probably have to be sampled and tested and additional wells may be needed. If not, then only four wells, one upgradient and three downgradient may have to be sampled. It was also indicated by the IEPA that the groundwater monitoring requirements under Part B may change from those outlined herein, however no specifics were available from IEPA personnel in Collinsville to delineate the changes which could be required, or when this information will be available. The general feeling, however, was that if anything, the Part B requirements will be the same or more stringent than those required under interim status. Therefore, it would appear that any work performed to install monitoring system similar to the one described will not be wasted.

If additional borings and piezometers above the minimum of five are necessary to delineate the direction of groundwater flow at the site, these may or may not need to be finished as permanent monitoring wells and would probably not have to be soil sampled as they are drilled. Even if only five monitoring wells are needed, it may not be clear at the time of drilling which ones should be finished as monitoring wells. To provide for this possibility, all piezometers should be constructed in soil

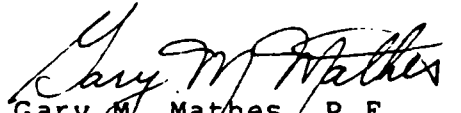


borings drilled similarly with monitoring wells and using threaded PVC pipe and well screen as outlined in Plate 5.

If there are any questions concerning the contents of this report, or if we may be of further service, please do not hesitate to contact me.

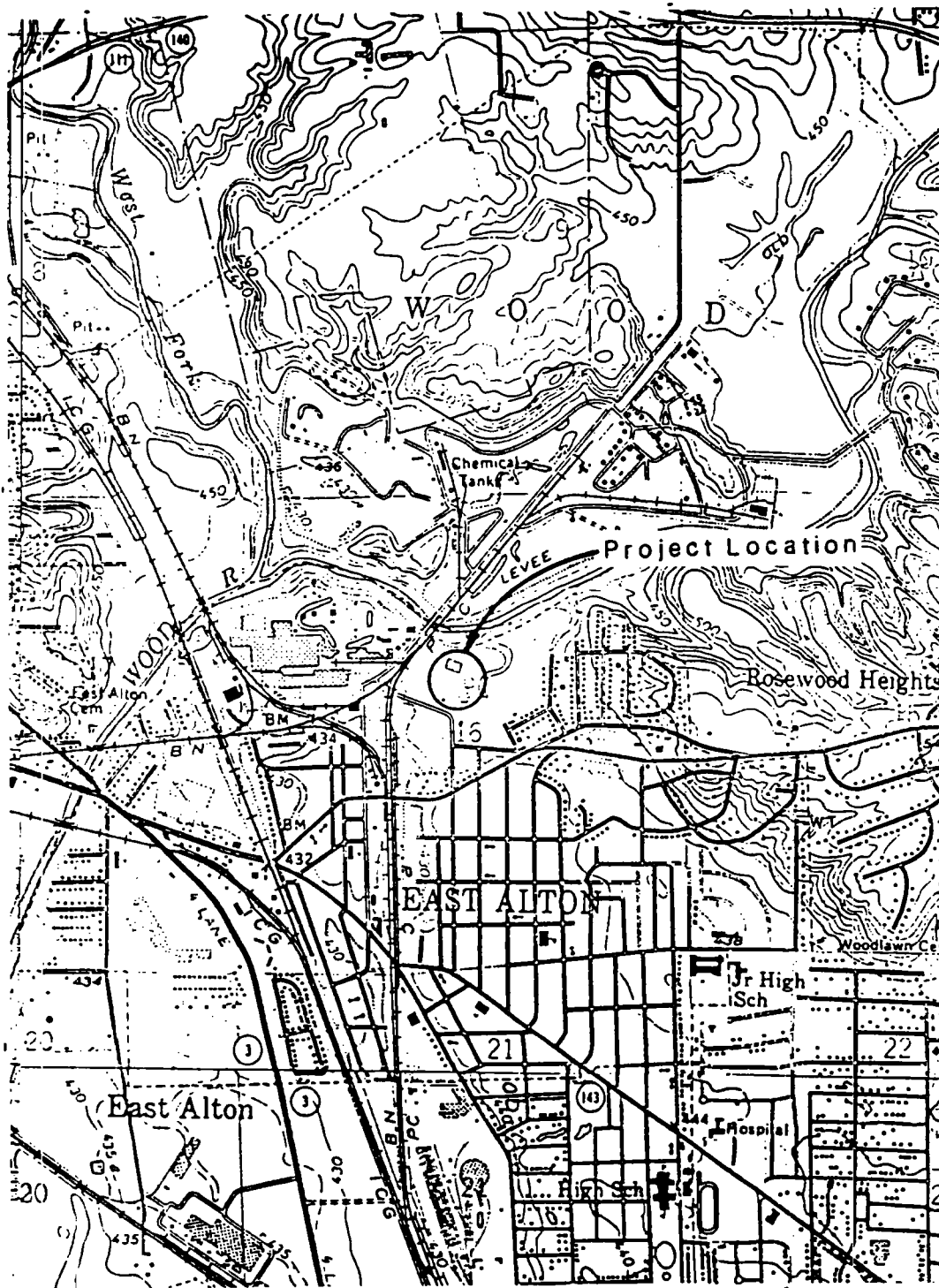
Sincerely,

JOHN MATHES & ASSOCIATES, INC.

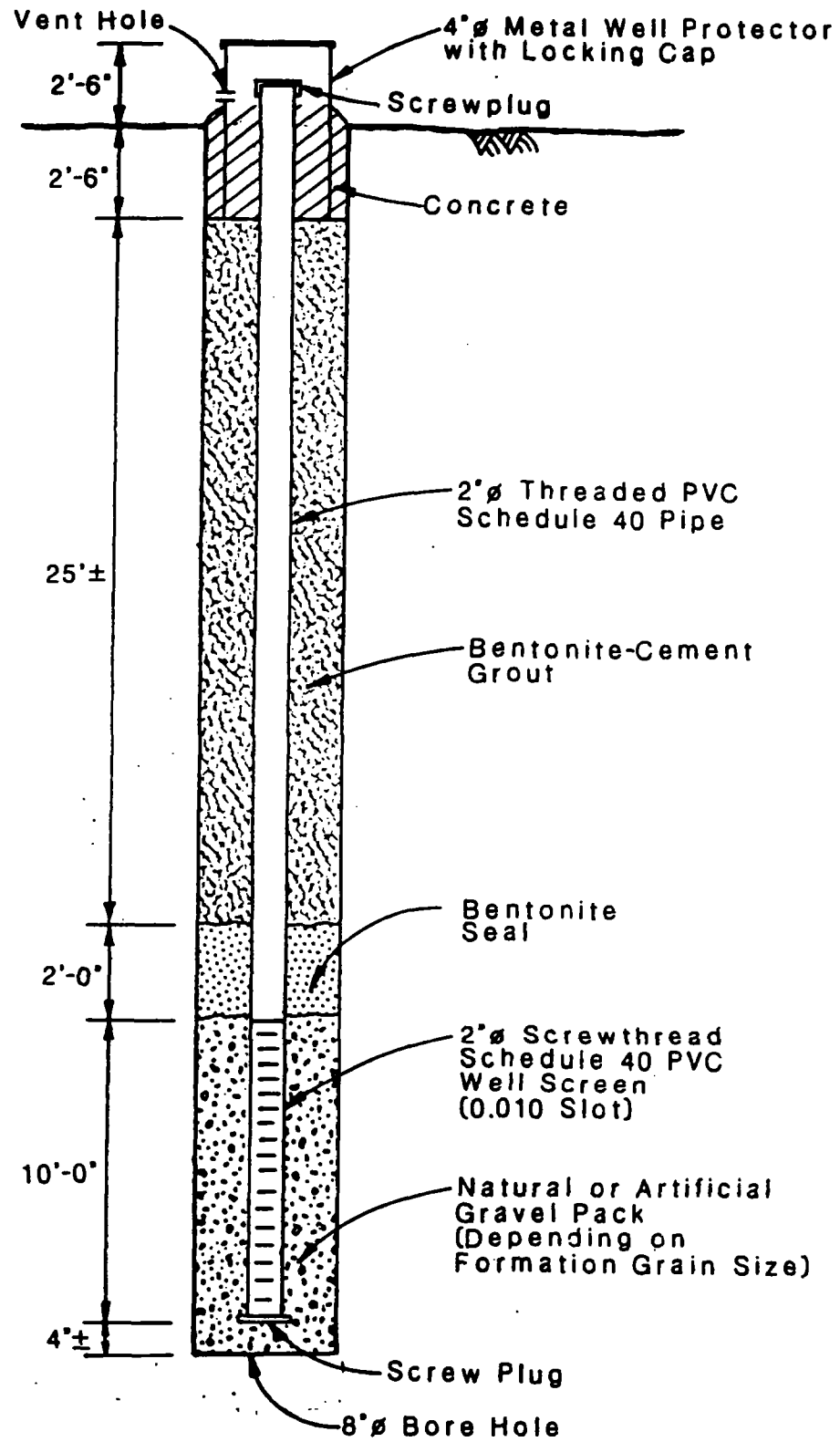

Gary M. Mathes, P.E.
Vice-President and
Director of Engineering

GMM:es/jcs





VICINITY MAP

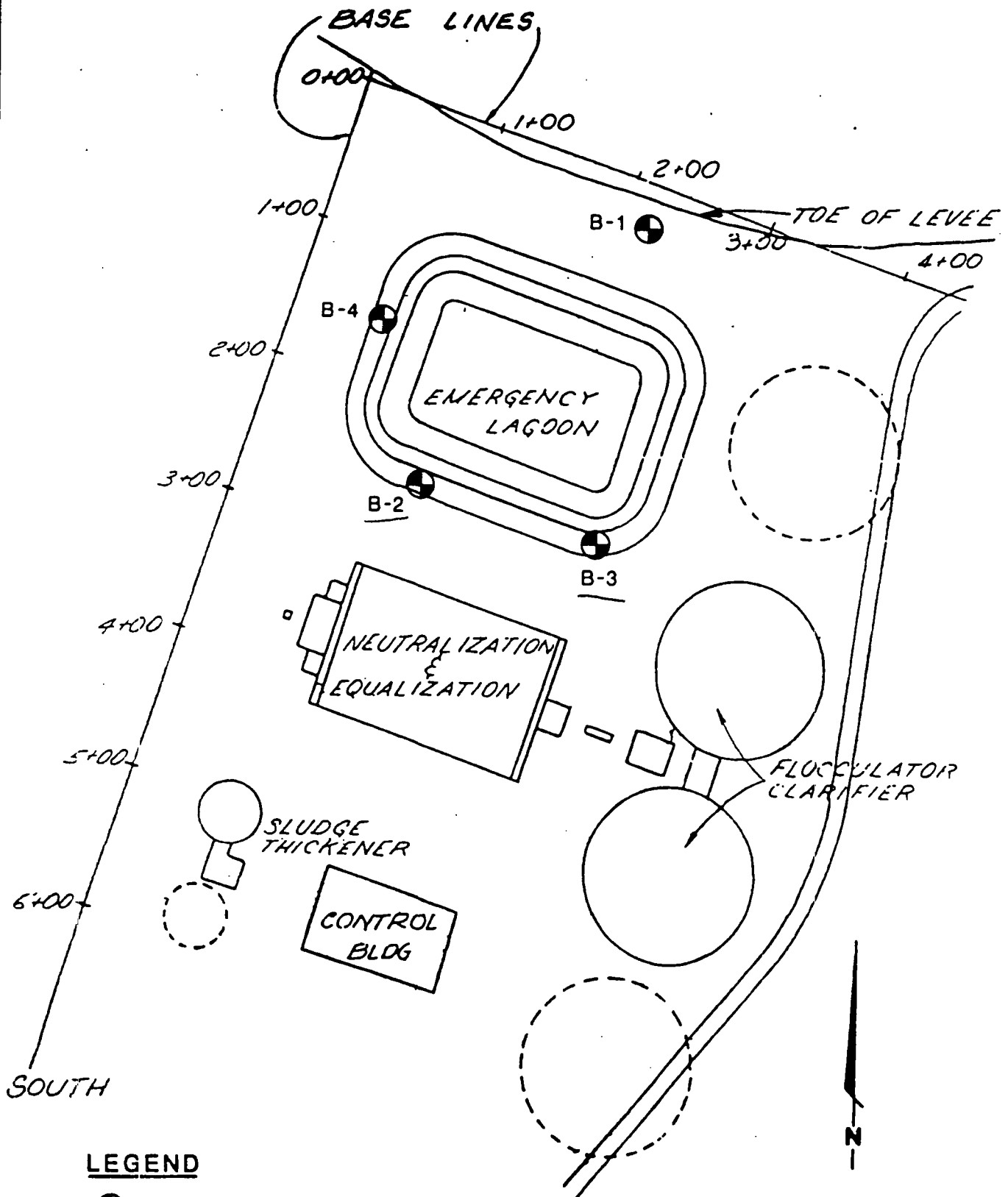


**TYPICAL MONITORING
WELL DETAIL**

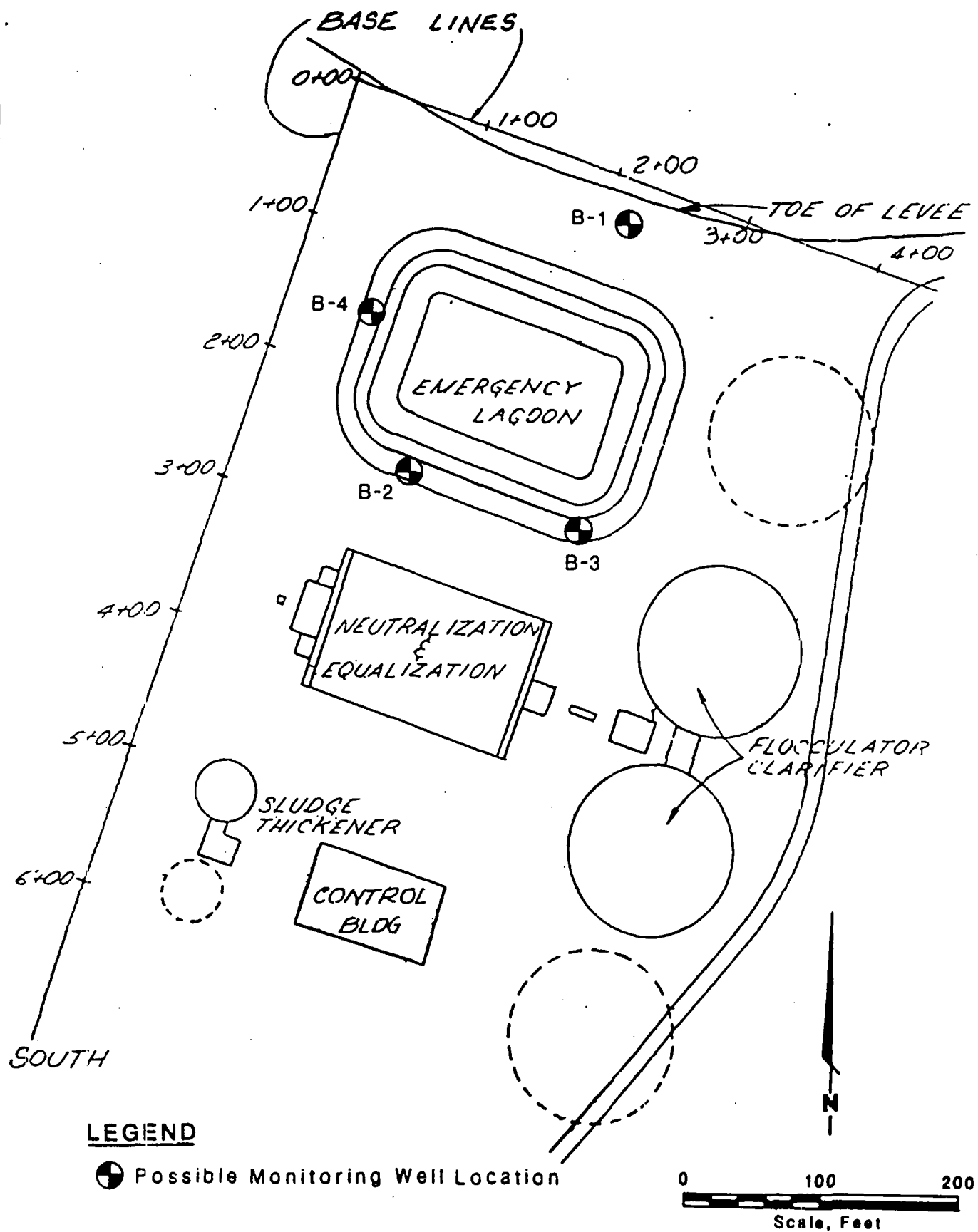
Attachment II
Project Completion Schedule

Groundwater Monitoring System
For The Zone 6 Emergency Holding Lagoon
Olin Corporation, East Alton, Illinois

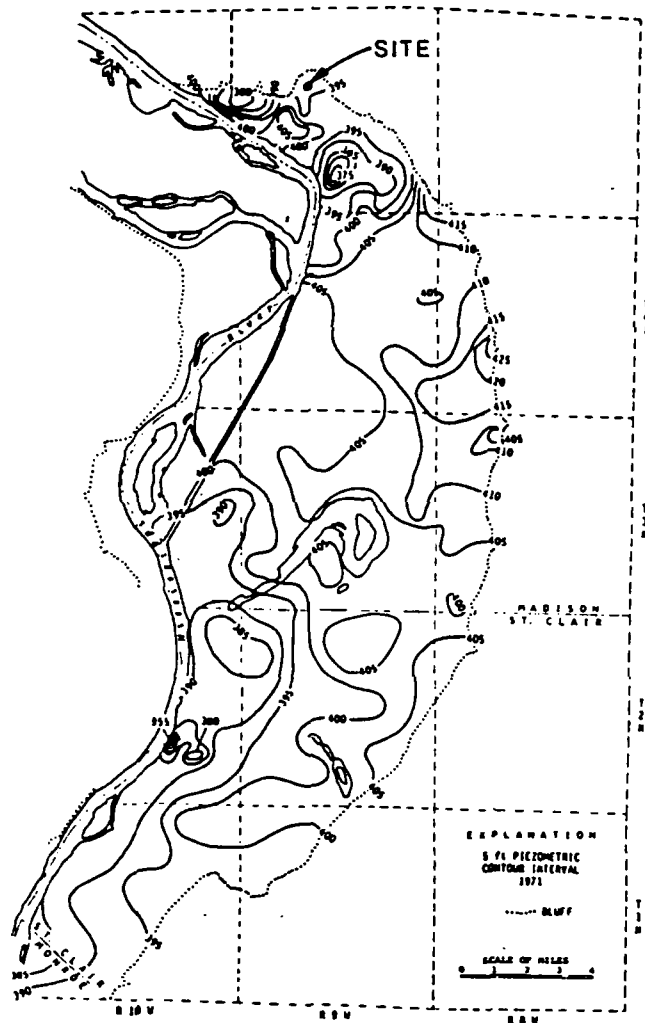
<u>Description of Activity</u>	<u>Date</u>
1. Start Drilling in accordance with John Mathes & Assoc. proposal dated 2/28/84.	July 9, 1984
2. Complete Drilling	July 20, 1984
*3. Final Report from Consultant including recommendations for additional wells if necessary.	August 17, 1984
4. Submittal of Consultant's Final Report and sampling plan to IEPA including identification of wells to be sampled, frequency of sampling and parameters to be analyzed.	August 24, 1984
5. Approval of sampling plan by IEPA	September 7, 1984
6. Collect first set of groundwater samples	September 21, 1984
7. Report analytical results of first sampling to IEPA	October 19, 1984
<p>*Note: If Consultant's Final Report contains a recommendation for additional wells to be drilled, the proposal for additional wells will be submitted to the IEPA for review/approval. If this step becomes necessary, it is anticipated that the collection of the first set of groundwater samples will be delayed by 7 to 8 weeks.</p>	



BORING AND MONITORING WELL LOCATION SKETCH



**BORING AND MONITORING
WELL LOCATION SKETCH**

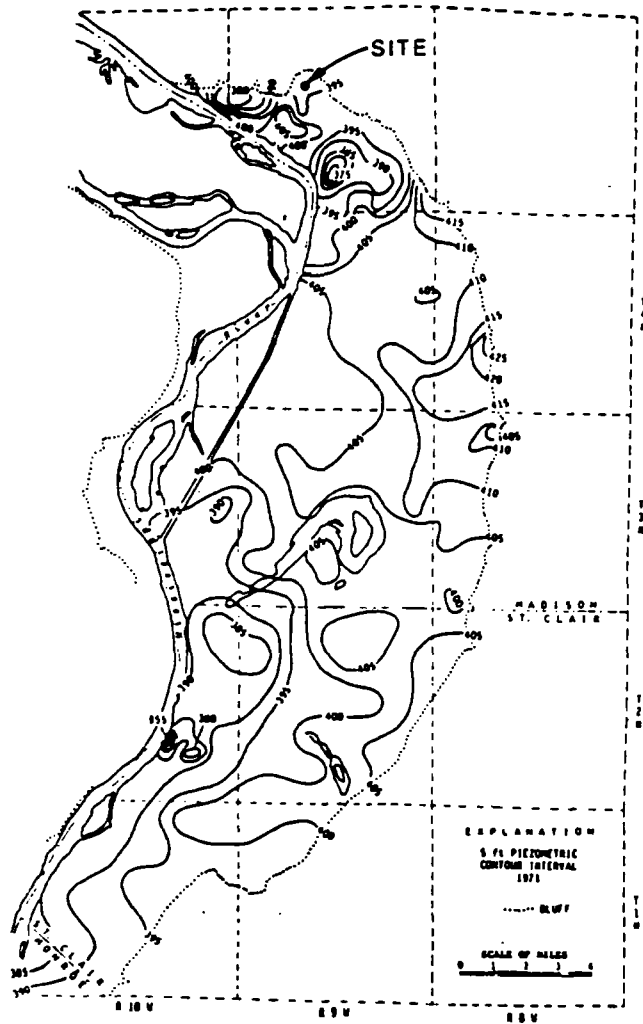


Piezometric Surface
AMERICAN BOTTOMS
NOVEMBER 1971
(After Emmons 1979)

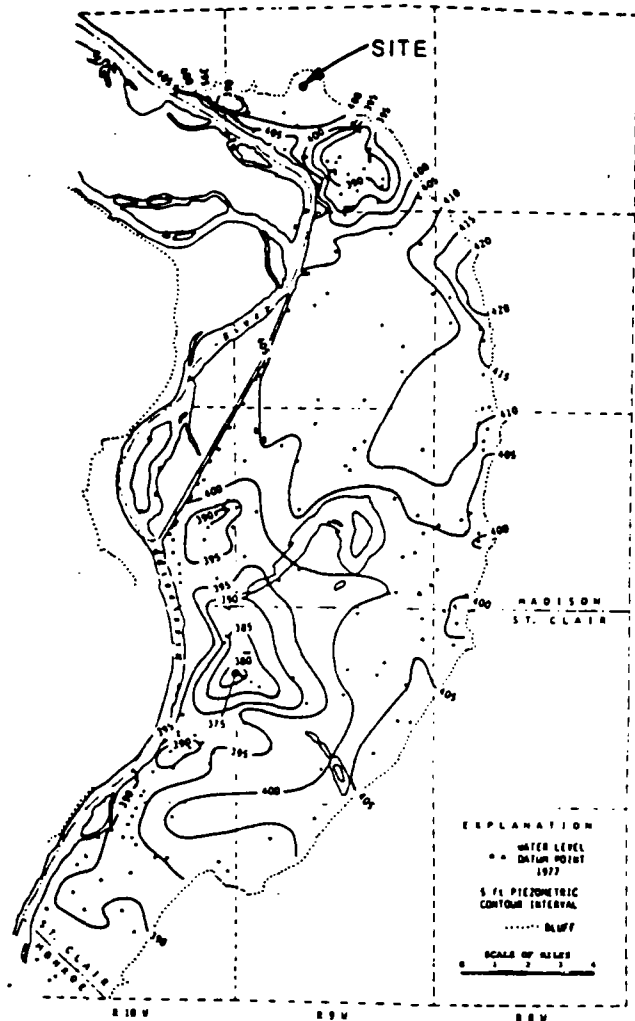




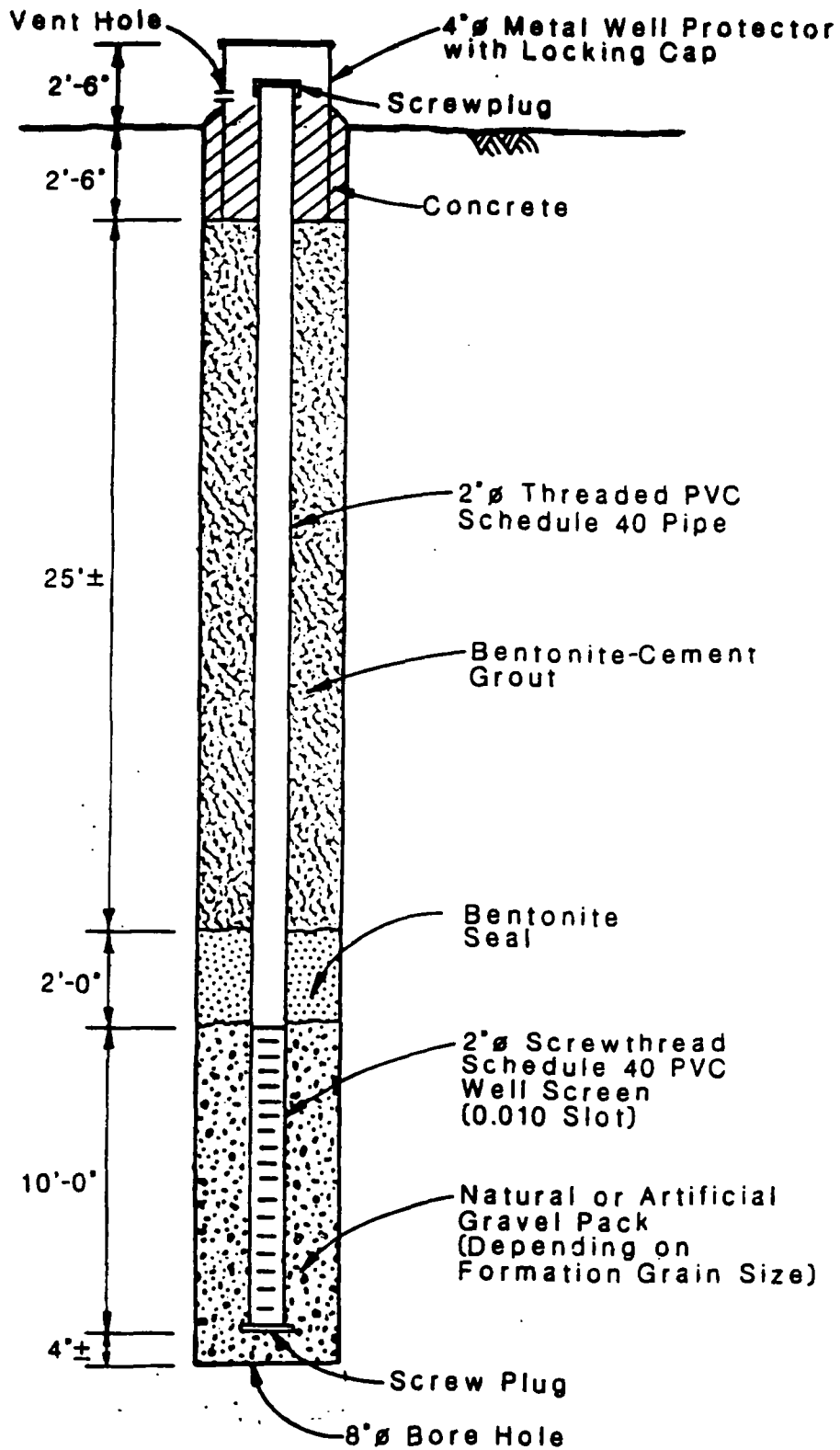
PLATE 4



**Piezometric Surface
AMERICAN BOTTOMS
NOVEMBER 1971
(After Emmons 1979)**



Piezometric Surface
AMERICAN BOTTOMS
NOVEMBER 1977
(After Emmons 1979)



**TYPICAL MONITORING
WELL DETAIL**

ILLINOIS POLLUTION CONTROL BOARD
November 12, 1982

In the matter of:)

PROPOSED WATER QUALITY STANDARD)
FOR WOOD RIVER (OLIN, EAST ALTON))

R81-24

PROPOSED RULE. FIRST NOTICE

ORDER OF THE BOARD (by D. Anderson):

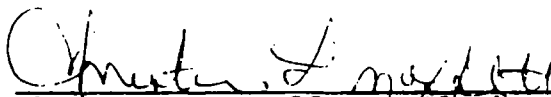
The Board hereby proposes to adopt 35 Ill. Adm. Code 304.203. The Clerk is directed to prepare a first notice for publication in the Illinois Register. The record will be held open for comment for 45 days from the date of publication.

Section 304.203 Copper Discharges by Olin Corporation

This section applies to an existing facility owned by Olin Corporation which discharges to Wood River Creek and the East Fork of Wood River Creek in Madison County. Such discharges shall not be subject to Section 304.105 as it applies to the water quality standard for copper of 35 Ill. Adm. Code 302.208.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 12th day of November, 1982 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board

In the matter of:)
)
PROPOSED WATER QUALITY STANDARD) R81-24
FOR WOOD RIVER (OLIN, EAST ALTON))

On September 24, 1980 Olin Corp. (Olin) filed a proposal for a site-specific water quality standard for copper in Wood River Creek, near East Alton, in Madison County. On August 17, 1981 an amended proposal was docketed as R81-24. On July 30, 1982 Olin filed a second amended proposal in codified form. The following provisions are involved in this rulemaking:

<u>35 Ill. Adm. Code</u>	<u>Chapter 3</u>	<u>Description</u>
§302.208	203(f)	General use water quality standard of 0.02 mg/l copper . (total)
Part 303	203.1	Exceptions to Rule 203 standards
§304.105	402	Requirement that effluents not cause violation of water quality standards
§304.124	408	Effluent standard of 0.5 mg/l copper (total)
§304.203	---	Codified designation for this proposal

HEARING

A public hearing was held on December 9, 1981 at Edwardsville. The Illinois Environmental Protection Agency (Agency) appeared as a participant. Representatives of Granite City Steel, the City of East Alton, and Illinois Power Company attended the hearing. There was no public comment, as such, although East Alton testified for Olin in favor of the proposal. The record was left open to allow for an economic impact hearing and possible additional merit hearings.

On February 22, 1982, the Department of Energy and Natural Resources advised the Board that the Economic Technical Advisory Committee had voted a "negative declaration" pursuant to P.A. 82-548. This satisfied the economic impact study requirement.

The following table summarizes the discharges and "Zones" of the facility which are involved in this rulemaking:

<u>Treatment Plant</u>	<u>Zones</u>	<u>Discharge</u>	<u>Type of Discharge</u>
Zone 6	1-7	015, 006	Main outfall
		002, 003, 004, 005, 009, 010, 013, 014	Overflow discharges
		007, 008, 011, 012	Stormwater discharges
Zone 17	17	001	Main outfall

Zone 6 is the older of the two treatment plants. Both plants treat for copper, and other heavy metals, by lime precipitation with polymer coagulation and flocculation. The discharges are authorized by NPDES Permit No. IL 0000230. Discharge 001 is to Wood River Creek; 015 is upstream on the East Fork.

In R76-21 the Board changed the copper effluent standard from 1.0 to 0.5 mg/l. Direct comparison of these numbers is difficult because at the same time the Board changed the method of determining the concentration from a daily to a monthly basis. In adopting this standard the Board found that it was technologically reasonable to treat copper to a level of 0.5 mg/l (43 PCB 367, September 24, 1981; 6 Ill. Reg. 563). As noted in that Opinion, Olin treats its wastewater to a greater degree. Its current variance contains a 0.3 mg/l limitation, based on monthly averages. Olin presented a summary of nearly 1200 daily composites from outfalls 015 and 001 from 1975 through 1981 (R. 146, Ex. B and C). The following table is abstracted from those exhibits:

<u>Copper (mg/l)</u>	<u>Cumulative % of daily composites less than indicated level</u>	
	<u>015</u>	<u>001</u>
0.5	97.6%	92.1%
1.0	99.6%	97.9%

The median values for the discharges are in the range of 0.2 to 0.3 mg/l, with about 98.8% of daily composites being less than 1.0 mg/l. Olin has violated the 0.3 mg/l monthly variance standard only two times since the variance was granted (R. 214).

WOOD RIVER CREEK

The lower reaches of Wood River Creek were discussed at length in a previous site-specific rulemaking concerning boron discharges from Illinois Power Company's ash pond, which is situated downstream from Olin (R76-18, 29 PCB 395, March 16, 1978; 2 Ill. Reg. no. 27, page 221, effective July 5, 1978).

The waterway is referred to as "Wood River" and as "Wood River Creek" (R. 27). The Board will continue with the latter designation which was followed in R76-18. Addition of the word "creek" to the name avoids confusion with the nearby town of Wood River. Furthermore, the term "river" generally denotes a larger stream than Wood River Creek, which has a seven day, ten year low flow of zero (R. 141).

Wood River Creek arises above the Mississippi River bluffs. It has a maximum length of about 20 miles and watershed of 125 square miles. The East Fork has an average flow of 110 million liters per day (44 cubic feet per second) (R. 42, 173, Ex. X, Z). The East and West Forks meet between Olin's discharge points, with the Zone 6 discharge (015) upstream on the East Fork. The lower reaches of Wood River Creek and the East Fork have been straightened and leveed. There is a dam across the mouth of the creek, which is less than one mile below Olin's discharges.

EXISTING WATER QUALITY

Olin has taken actual water quality measurements in 1975 and in 1980 (Ex. P, W). Upstream copper levels tend to be around 0.02 mg/l, the general use water quality standard. Downstream, grab samples have been taken which are in excess of 0.5 mg/l, but averages tend to be below 0.1 mg/l (R. 95, Ex. P, W). Stream modeling tends to indicate that levels in excess of 0.5 mg/l should occur 19% of the time, but this is not borne out by the data (Ex. Z-1).

ENVIRONMENTAL IMPACT

The areas surrounding the lower reaches of Wood River Creek are almost entirely occupied by heavy industry, including Olin, Illinois Power and a junk yard. There is a small area where residences are close to the levy and where public access is possible. However, the Mayor of East Alton and other testified that they have never known of any recreational use being made of the creek. The area is heavily overgrown and is not accessible or attractive from a recreational point of view. The creek does not normally have a sufficient flow for usual recreational activities such as swimming and boating (R. 32, 127, 163).

standards. In January, 1982 the general effluent standard of Section 304.124 was changed to 0.5 mg/l, mooting the site specific modification of the effluent standard. On July 30, 1982, in response to questions raised at the hearing, Olin returned to a modified water quality standard of 0.5 mg/l. At the hearing, and in its comments of August 31, 1982, the Agency opposed this shift back to a straight water quality standard revision. On September 21 Olin indicated that it didn't care whether relief was granted by way of modification of the water quality standard or exemption from the water quality standard.

The Board has proposed to adopt Section 304.203, which would provide Olin with a site-specific exemption from the requirement of Section 304.105 that its effluent discharges comply with the water quality standard for copper of Section 302.208. The text of the proposed rule appears in a separate Order. This Opinion supports that Order.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion was adopted on the 12th day of November 1982 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board

ILD006271696

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9. (See Attachment 2-2C-V A,B,C)

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
1. Resorcinol	Raw Material in Explosives Mfg.		
2. Quinoline	Small quantities in Analytical Lab.		
3. Formaldehyde	Component of adhesives, drawing compound and water treatment chemical.		
4. Diethylamine	Component of water treatment chemical.		
5. Epichlorohydrin	Component of water treatment chemical		
6. Ethylene Diamene	Component of water treatment chemical.		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you do or expect that you will over the next 5 years use or manufacture as an intermediate or final product or byproduct?

☒ YES (list all such pollutants below)

☐ NO (go to Item VI-B)

See Attachment 2-2C-VI-A

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharges of pollutants may during the next 5 years exceed two times the maximum values reported in Item V7

☐ YES (complete Item VI-C below)

☒ NO (go to Section VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years, to the best of your ability at this time. Continue on additional sheets if you need more space.

EPA I.D. NO. ILD006271696

ATTACHMENT 2-2C-I
OUTFALL LOCATION
OLIN CORPORATION
EAST ALTON, ILLINOIS

OUTFALL NUMBER	LATITUDE			LONGITUDE			RECEIVING WATER
	DEG.	MIN.	SEC.	DEG.	MIN.	SEC.	
002	38	53	25	90	06	28	East Fork Wood River
003	38	53	24	90	07	01	Wood River
004	38	53	25	90	06	49	Wood River
005 (005A)	38	53	25	90	06	42	East Fork Wood River
006	38	53	20	90	06	25	East Fork Wood River
007	38	53	29	90	06	47	East Fork Wood River
008	38	53	23	90	06	29	East Fork Wood River
009	38	53	24	90	06	16	East Fork Wood River
010	38	53	33	90	05	44	East Fork Wood River
011	38	53	41	90	05	24	East Fork Wood River
012	38	53	46	90	06	55	West Fork Wood River
013	38	53	26	90	06	43	East Fork Wood River
014	38	53	25	90	06	40	East Fork Wood River
015	38	53	20	90	06	20	East Fork Wood River
016	38	53	31	90	05	36	East Fork Wood River
017	38	53	57	90	05	34	East Fork Wood River
018	38	53	20	90	07	11	Wood River

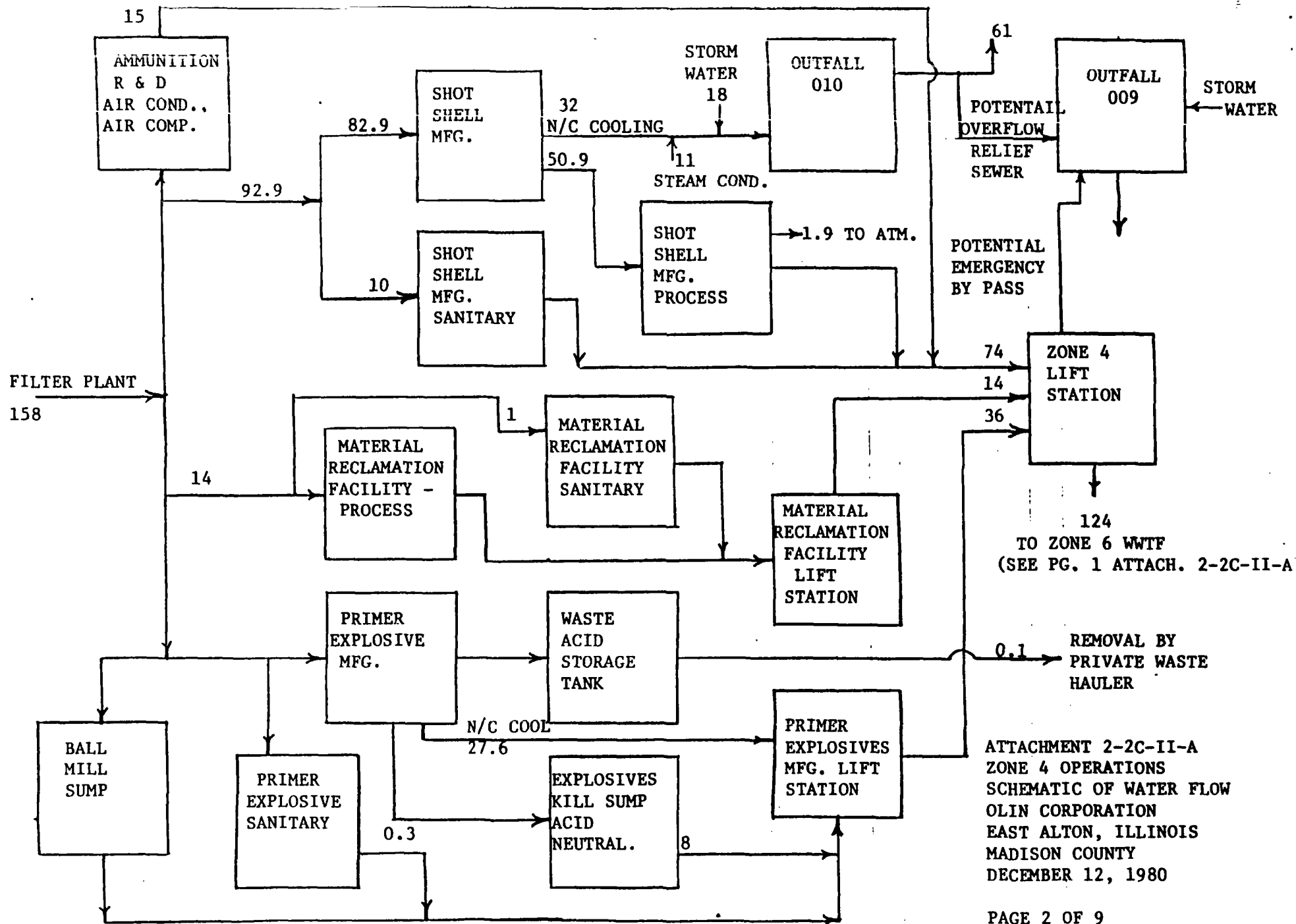
EPA I.D. NUMBER ILD006271696

ATTACHMENT 2-2C-II-A

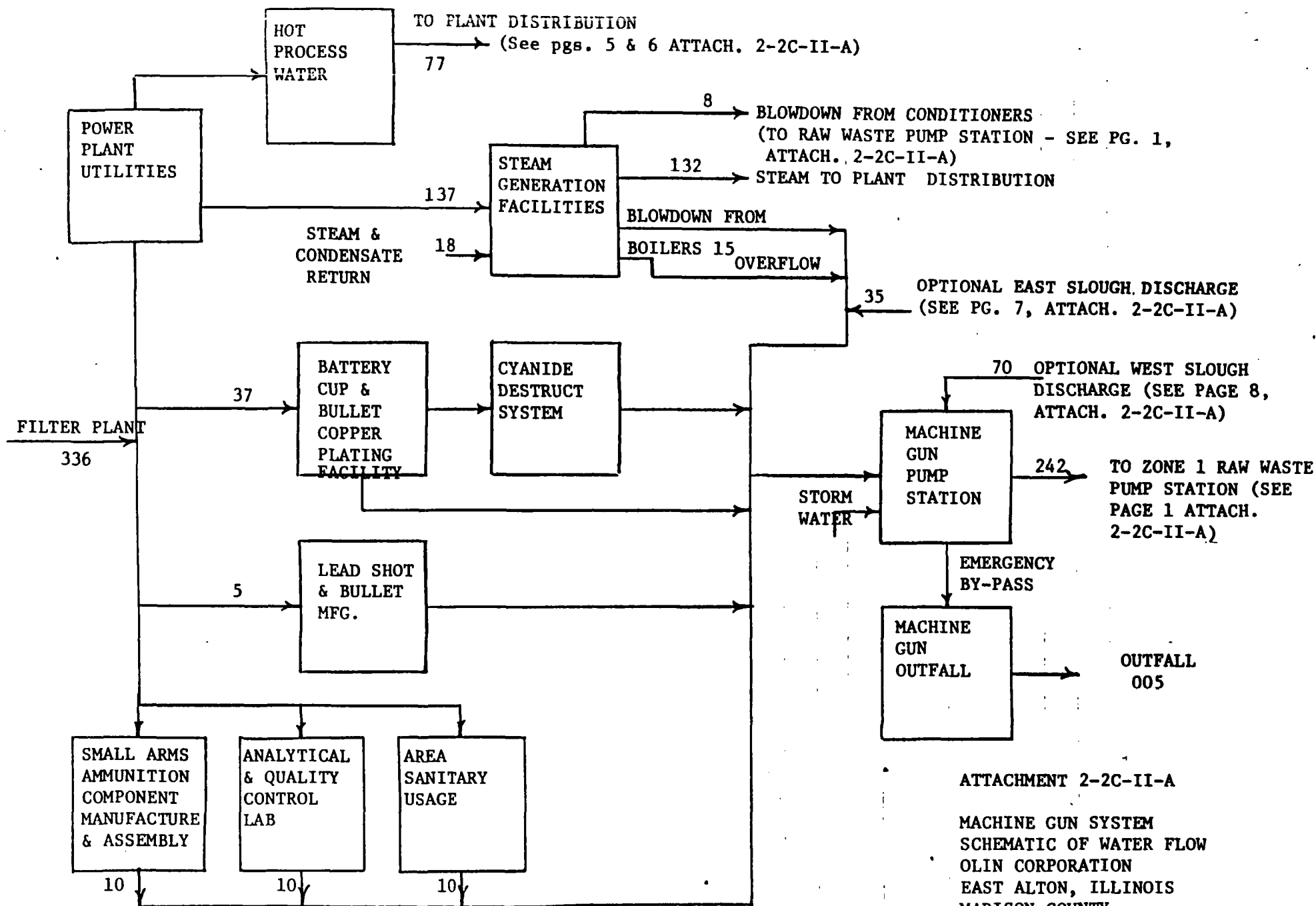
SCHEMATIC OF WATER FLOW* - INDEX
OLIN CORPORATION
EAST ALTON, ILLINOIS

<u>TITLE</u>	<u>PAGE</u>
OVERALL SCHEMATIC OF WATER FLOW	1
ZONE 4 OPERATIONS - SCHEMATIC OF WATER FLOW	2
ZONE 2 OPERATIONS - SCHEMATIC OF WATER FLOW	3
MACHINE GUN SYSTEM - SCHEMATIC OF WATER FLOW	4
CENTRAL SYSTEM - SCHEMATIC OF WATER FLOW	5
ROLL BOND SYSTEM - SCHEMATIC OF WATER FLOW	6
EAST SLOUGH - SCHEMATIC OF WATER FLOW	7
WEST SLOUGH - SCHEMATIC OF WATER FLOW	8
ZONE 6 WWTF - SCHEMATIC OF WATER FLOW	9

*Flow rates shown in schematics represent a combination of measured flows and best engineering estimates. The time period used for flows is 10/1/79 through 9/30/80.

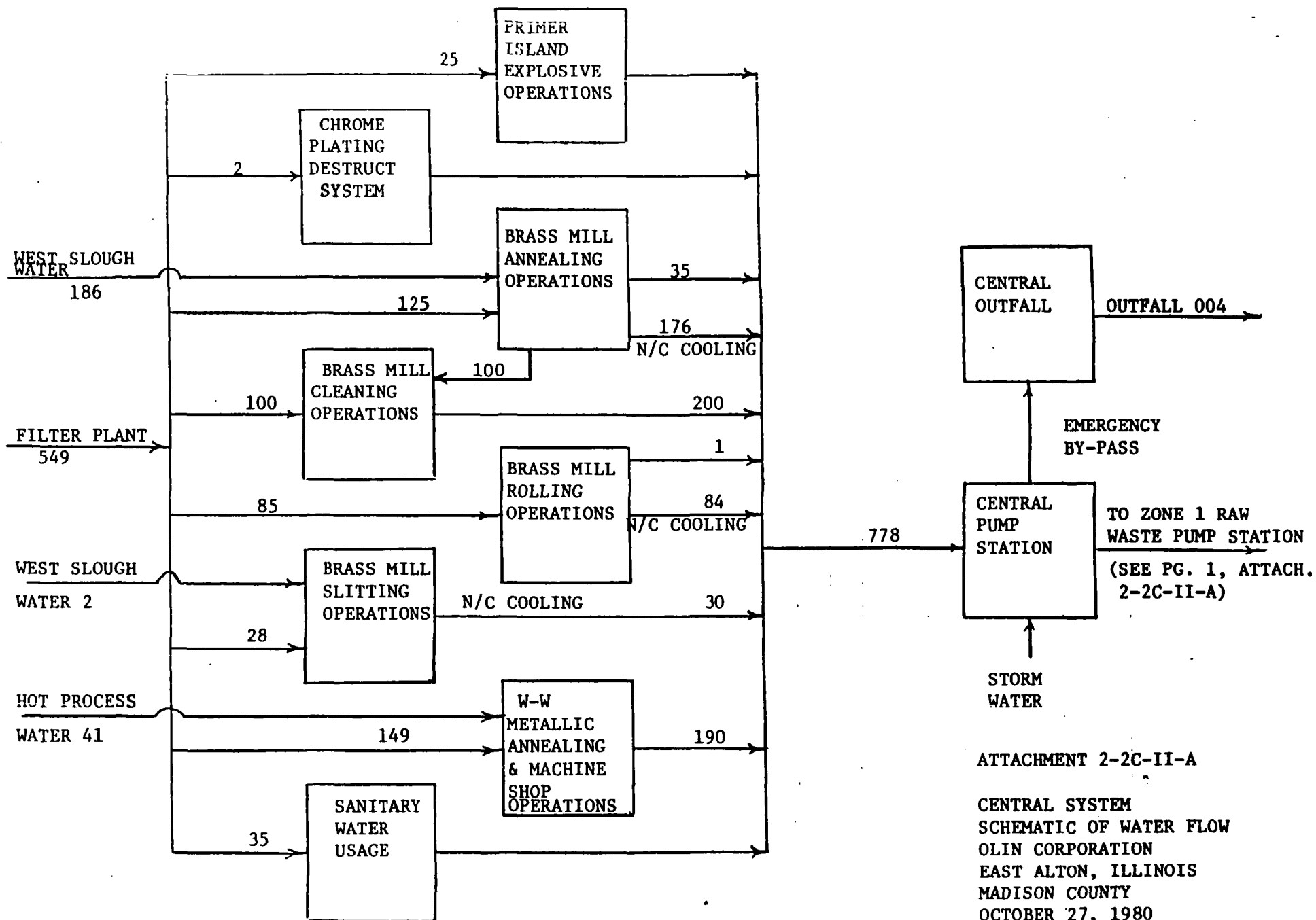


ATTACHMENT 2-2C-II-A
 ZONE 4 OPERATIONS
 SCHEMATIC OF WATER FLOW
 OLIN CORPORATION
 EAST ALTON, ILLINOIS
 MADISON COUNTY
 DECEMBER 12, 1980



ATTACHMENT 2-2C-II-A

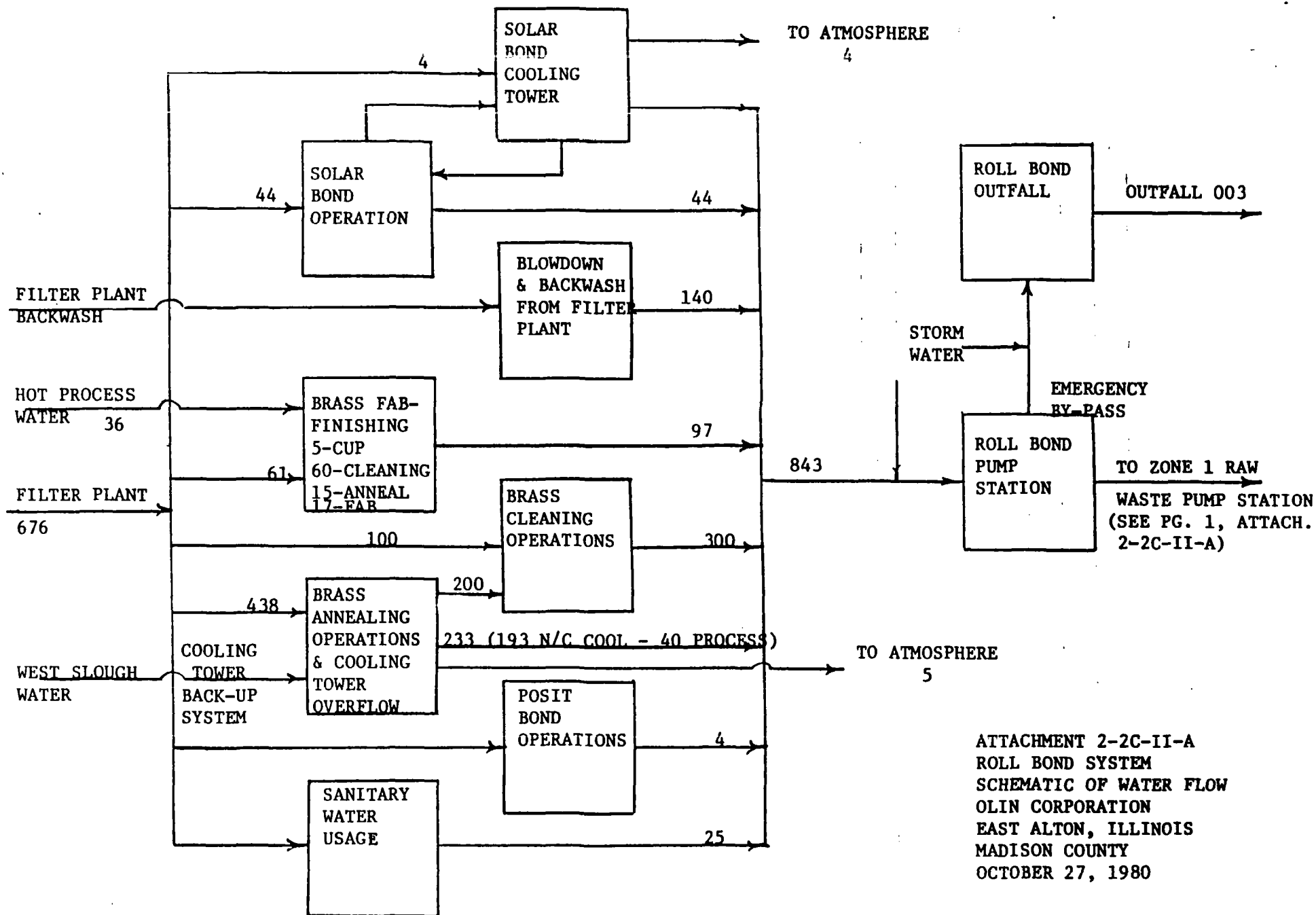
MACHINE GUN SYSTEM
SCHEMATIC OF WATER FLOW
OLIN CORPORATION
EAST ALTON, ILLINOIS
MADISON COUNTY
OCTOBER 27, 1980



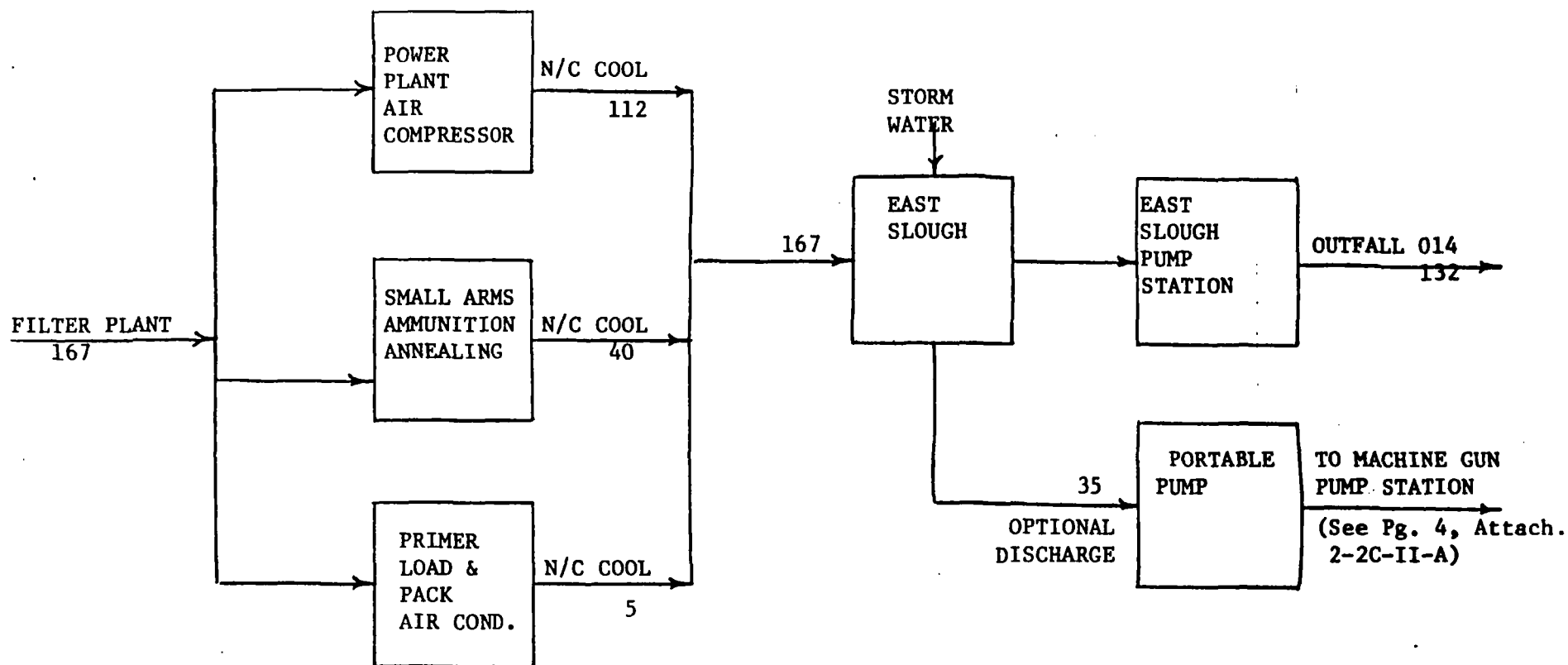
FLOW RATES GIVEN IN 1000 GALLONS PER DAY

ATTACHMENT 2-2C-II-A

CENTRAL SYSTEM
SCHEMATIC OF WATER FLOW
OLIN CORPORATION
EAST ALTON, ILLINOIS
MADISON COUNTY
OCTOBER 27, 1980



ATTACHMENT 2-2C-II-A
 ROLL BOND SYSTEM
 SCHEMATIC OF WATER FLOW
 OLIN CORPORATION
 EAST ALTON, ILLINOIS
 MADISON COUNTY
 OCTOBER 27, 1980



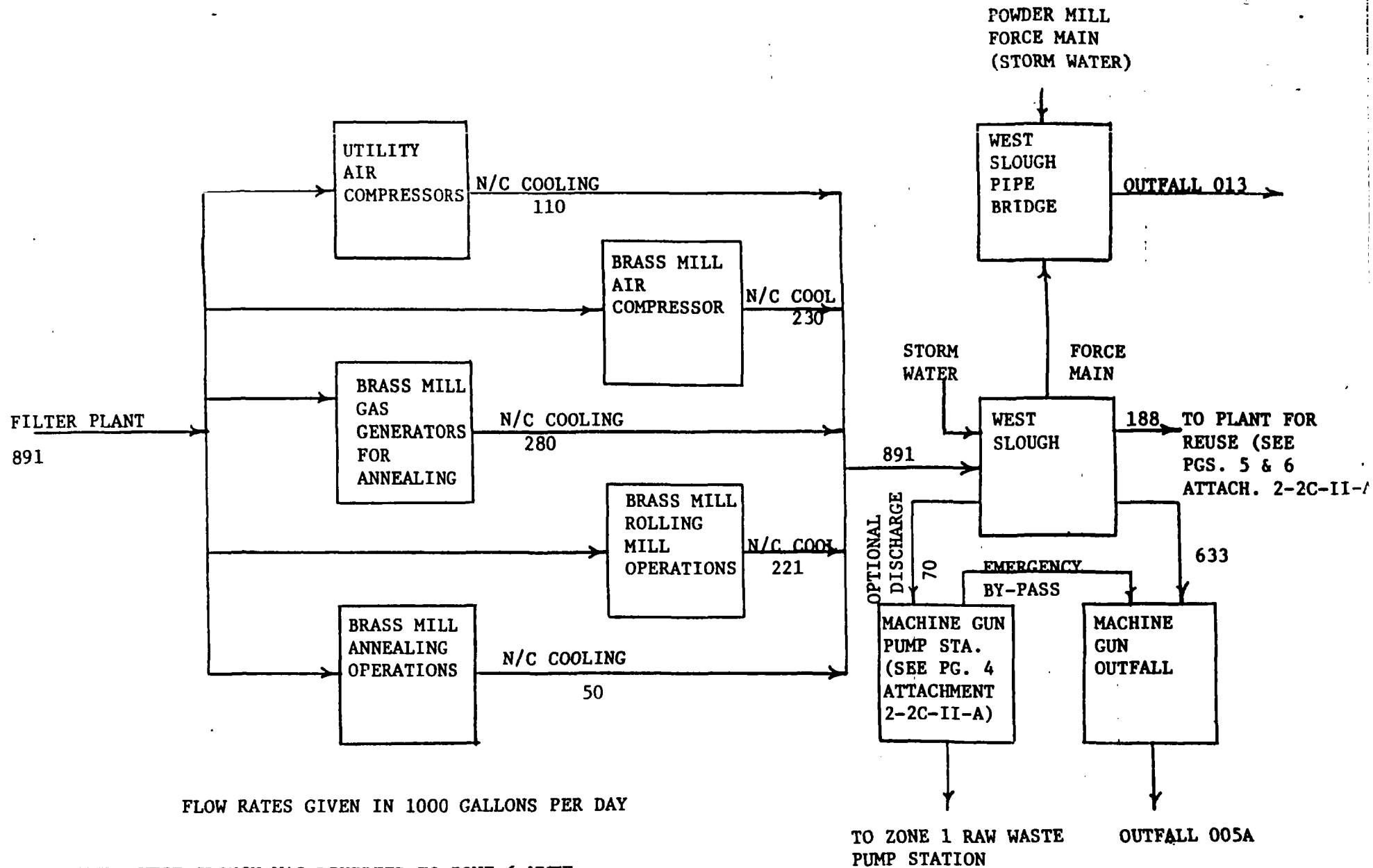
FLOW RATES GIVEN IN 1000 GALLONS PER DAY

RECEIVED
 DEC 24 1980
 Environmental Protection Agency
 WSC - Permit Log In

ATTACHMENT 2-2C-II-A

EAST SLOUGH
 SCHEMATIC OF WATER FLOW
 OLIN CORPORATION
 EAST ALTON, ILLINOIS
 MADISON COUNTY
 OCTOBER 27, 1980

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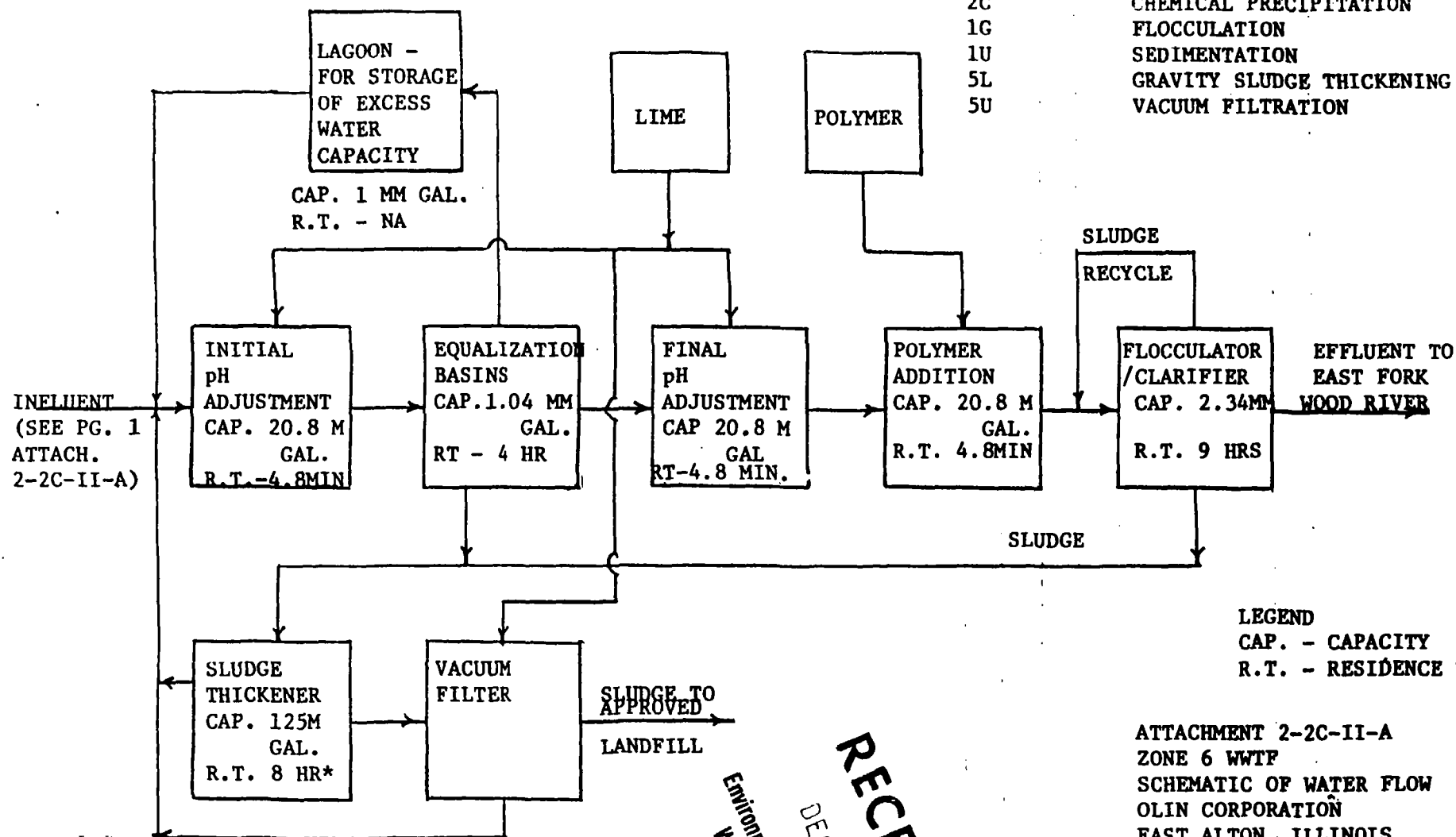
FLOW RATES GIVEN IN 1000 GALLONS PER DAY

*ESTIMATE: WEST SLOUGH WAS DIVERTED TO ZONE 6 WWTF
10% OF THE TIME DURING 10/79 TO 10/80.

ATTACHMENT 2-2C-II-A
WEST SLOUGH
SCHEMATIC OF WATER FLOW
OLIN CORPORATION
EAST ALTON, ILLINOIS
MADISON COUNTY

TREATMENT CODES

CODE	DESCRIPTION
2K	NEUTRALIZATION
2C	CHEMICAL PRECIPITATION
1G	FLOCCULATION
1U	SEDIMENTATION
5L	GRAVITY SLUDGE THICKENING
5U	VACUUM FILTRATION



LEGEND
CAP. - CAPACITY
R.T. - RESIDENCE TIME

*BASED ON DESIGN FLOW RATE OF 260 GPM

RECEIVED
DEC 24 1980
Environmental Protection Agency
WPC - Permit Log In

ATTACHMENT 2-2C-II-A
ZONE 6 WWTF
SCHEMATIC OF WATER FLOW
OLIN CORPORATION
EAST ALTON, ILLINOIS
MADISON COUNTY
OCTOBER 27, 1980

EPA I.D. NUMBER ILD006271696
 ATTACHMENT 2-2C-II-B
 OPERATIONS CONTRIBUTING FLOW/TREATMENT
 OLIN CORPORATION
 EAST ALTON, ILLINOIS

1. OUT- FALLING (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	A. OPERATION (list)	B. AVERAGE FLOW (include units)*	C. DESCRIPTION	D. LIST CODES FROM TABLE 2C-1	
003	Cu Base Solar Bond Panels	0	Potential Storm		
	Cu & Cu Alloy Annealing	0	Water Overflow	4A	
	Cu & Cu Alloy Fabricating	0			
	Cu Alloy Bonding	0			
(Cu & Cu Alloy Clean & Descale	0			
	Cu & Cu Alloy Cupping	0			
	Filter Plant Backwash	0			
	Sanitary	0			
003	Storm Water Runoff	Flow dependent on storm event	Discharge to Surface Water	4A	
			(See Attachment 2-2C-II-A, Pg.1)		
004	Cu & Cu Alloy Annealing	0	Potential Storm		
	Cu & Cu Alloy Cleaning	0	Water Overflow	4A	
	Cu & Cu Alloy Rolling	0			
	Cu & Cu Alloy Slitting	0			
	Chrome Plating	0			
	Cu & Cu Alloy Cupping	0			
	Explosives Mfg.	0			
	Sanitary	0			
005	Shot Shell Mfg.	0	Potential Storm		
	Centerfire Mfg.	0	Water Overflow	4A	
	Rimfire Mfg.	0			
	Military Ammunition	0			
	Lead Shot And Bullet Mfg.	0			
	Copper Plating	0			
	Steam Generation	0			
	Lab	0			
	Sanitary	0			

*Flow given in 1000 gallons per day.

EPA I.D. NUMBER ILD006271696
 ATTACHMENT 2-2C-II-B
 OPERATIONS CONTRIBUTING FLOW/TREATMENT
 OLIN CORPORATION
 EAST ALTON, ILLINOIS

1. OUT- FALLING (List)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	A. OPERATION (List)	B. AVERAGE FLOW (Include units)	C. DESCRIPTION	D. LIST CODES FROM TABLE 2C-1	
005A, 013	Cu & Cu Alloy Anneal N/C+Cool	330	Discharge to surface water	4A	
	Cu & Cu Alloy Roll. N/C-Cool	221	Reuse of effluent	4C	
	Air Compressors - N/C - Cool	340			
006- 015	Cu & Cu Alloy Rolling - Process	1	All flows are processed through the Zone 6 WWTF (See Attachment		
	N/C Cool	84			
	Cu & Cu Alloy Anneal - Process	120	2C-II-A Pg. 9)		
	N/C Cool	369	Treatment Codes:		
	Cu & Cu Alloy Cleaning	710	Neutralization	2K	
	Cu & Cu Alloy Slitting N/C Cool	30	Chemical Precipitation	2C	
	Cu & Cu Alloy Cupping	15	Flocculation	1G	
	Cu & Cu Alloy Bonding	4	Sedimentation	1U	
	Cu & Cu Alloy Fabricating	17	Gravity Sludge Thick.	5L	
	Cu Solar Bond Panels	44	Vacuum Filtration	5U	
	Steam Generation	23			
	Chrome Plating	2			
	Copper Plating	37			
	Lead Shot & Bullet Mfg.	5			
	Shotshell Wad Mfg. Process N/C Cool	90 30			
	Shotshell Mfg.	49			
	Explosives Mfg. Process N/C Cool	27 27.6			
	Ammunition Mfg.	10			
	Ball Mill	0.1			
	Sanitary	136.3			
	Lab	10			
	Wastewater Treatment	19			
	Filter Plant Backwash	140			
	Ammunition Component Reclaim.	13			
	Also includes optional flow from:				
	West Slough (005A)	70			
	& East Slough (014)	35			

*Flows given in 1000 gallons per day.

EPA I.D. NUMBER ILD006271696
 ATTACHMENT 2-2C-II-B
 OPERATIONS CONTRIBUTING FLOW/TREATMENT
 OLIN CORPORATION
 EAST ALTON, ILLINOIS

1. DUTY-FALLING NO. (List)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	A. OPERATION (List)	B. AVERAGE FLOW (Include units)	C. DESCRIPTION	D. LIST CODES FROM TABLE 2C-1
006, 015 Contd	Ammunition R & D	1		
	Air Conditioning (N/C Cool)	4		
	Air Compressor (N/C Cool)	10		
010	Shot Shell Mfg. (N/C Cool)	32	Discharge to Surface Water	4A
	Steam Condensate (N/C)	11		
014	Air Compressor (N/C Cool)	112	Discharge to Surface Water	4A
	Ammunition-Anneal (N/C Cool)	40		
	Air Cond. (N/C Cool)	5		
	STORM WATER DISCHARGES:			
002	Storm Water Runoff	Flow dependent on storm event.	Discharge to Surface Water	4A
007	Storm Water Runoff	Flow dependent on storm event.	Discharge to Surface Water	4A
008	Storm Water Runoff	Flow dependent on storm event.	Discharge to Surface Water	4A
009	Storm Water Runoff/Potential Overflow From 010 & Zone 4 LS	Flow dependent on storm event	Discharge to Surface Water	4A
011	Storm Water Runoff	Flow dependent on storm event	Discharge to Surface Water	4A
012	Storm Water Runoff	Flow dependent on storm event	Discharge to Surface Water	4A
016	Storm Water Runoff	Flow dependent on storm event	Discharge to Surface Water	4A
017	Storm Water Runoff	Flow dependent on storm event	Discharge to Surface Water	4A
018	Storm Water Runoff	Flow dependent on storm event.	Discharge to Surface Water	4A

*Flows given in 1000 gallons per day.

COMPLIANCE MONITORING AND ENFORCEMENT SCREEN (cont'd)

18.
18. AREA (C2352)
- Required

FORMAT:

GW, CP, FR, PB, CS, OT, OR MA

ERROR:

AREA MAY ONLY BE GW, CP, FR, PB, CS, OT, OR MA

Add clarifying information

Reverse order per CMEL internal translation screen.

19.
19. SEQ (2353)
- For Delete and Change Only

FORMAT:

numeric 9(2) values: 01-99

ERROR:

SEQUENCE NUMBER IS REQUIRED AND MUST BE NUMERIC

No chg

20.
20. ACTION TYPE (C2354)

FORMAT:

~~X OR BLANK~~

ERRORS:

ACTION TYPE MAY ONLY BE ~~IN, WN, AO, CI, CR~~ 01-13 OR 80-99
ACTION TYPE IS REQUIRED FOR AN ADD TRANSACTION

Make Code 14 a valid value

Note to ISD/CSC. Open update program so all codes (01-99) are valid.

21.
21. DATE TAKEN (C2355)

FORMAT:

numeric 9(6) YYYYMMDD > 800101 < Today's date

ERRORS:

THE DATE TAKEN IS NOT A VALID DATE
DATE TAKEN IS REQUIRED FOR AN ADD
DATE TAKEN MUST BE BETWEEN 800101 AND TODAY'S DATE

However, we want the screen entry edit check to prevent entry of any value 15-79.

COMPLIANCE MONITORING AND ENFORCEMENT SCREEN (cont'd)

²²
~~21~~. COMPLNCE SCHED DATE (C2356)

FORMAT:

no chg
numeric 9(6) YYMMDD > 800101

ERRORS:

THE DATE SCHED IS NOT A VALID DATE
DATE SCHED MUST BE LATER THAN 800101
DATE SCHED MAY ONLY BE LATER THAN DATE THE ACTION WAS TAKEN

²³
~~22~~. COMPLNCE ACTUAL DATE (C2357)

FORMAT:

no chg
numeric 9(6) YYMMDD > 800101 < Today's date

ERRORS:

THE ACTUAL DATE IS NOT A VALID DATE
ACTUAL DATE MUST BE BETWEEN 800101 AND TODAY'S DATE
ACTUAL DATE MAY ONLY BE LATER THAN DATE THE ACTION WAS TAKEN
MAY NOT USE '\$' FOR AN ADD TRANSACTION

²⁴
~~23~~. PENALTY ASSESSED (C2358)

FORMAT:

no chg
numeric 9(8)

ERROR:

ASSESSED MAY ONLY BE NUMERIC, '\$', OR BLANK
MAY NOT USE '\$' FOR AN ADD TRANSACTION

²⁵
~~24~~. PENALTY COLLECTED (C2359)

FORMAT:

no chg
numeric 9(8)

ERROR:

COLLECTED MAY ONLY BE NUMERIC, '\$', OR BLANK
MAY NOT USE '\$' FOR AN ADD TRANSACTION

Add Responsible Agency - for Enforcement Action (C 2360)

Required field
FORMAT: X(1) ERRORS: May only be E, S, X, \$
~~COMPLIANCE MONITORING AND ENFORCEMENT SCREEN (cont'd)~~
May not be blank

26. FREE FIELDS 1, 2, 3 (C2360, C2361, C2362)

FORMAT:

alphanumeric

~~x(1)~~ x(2) x(3)

ERRORS:

FIELD 1 MAY ONLY BE E, S, X, \$, OR BLANK
MAY NOT USE '\$' FOR AN ADD TRANSACTION

27. ACTION (Delete, Add, or Change)

FORMAT:

D, A, C, OR X

ERROR:

ACTIONS SUBORDINATE TO AN ADD MUST BE 'A' OR 'X'
ACTION MAY ONLY BE 'D', 'A', 'C', OR 'X'

28. SEQUENCE NUMBER (C2321)
-For Delete or Change only

FORMAT:

numeric 9(2) values 01-99

ERROR:

THE SEQUENCE NUMBER IS REQUIRED

29. COMMENTS (C2322)

FORMAT:

alphanumeric x(80)

ERRORS:

NONE

COMPLIANCE MONITORING AND ENFORCEMENT SCREEN (cont'd)

***ACCEPT, REJECT, OR EDIT? ***

If response is 'A', the system will prompt:

DO YOU WISH TO REUSE THIS SCREEN ('Y' or 'N')?

If response is 'Y', the system clears the screen and returns to the Facility ID.

If response is 'N', the system returns to the Main Menu.

If response is 'R', the system will clear the screen and return to the Facility ID.

If response is 'E', the system will return to the Facility ID.